

Official Journal of the National Brotherhood Electrical Workers of America.

VOL. 8, No. 8.

ROCHESTER, N. Y., MARCH, 1899.

SINGLE COPIES, 10 CENTS.
\$1.00 PER YEAR, IN ADVANCE.

A Modern Fire Signal.

By John Dennis.

Ever since the passing of the old watch tower, from which fires were announced, the tendency in fire alarms has been towards certainty of location and saving of the important element of time in the first minutes of an incipient conflagration. Until recently the advance in these respects has scarcely kept pace with the improvement in devices for fighting fire and facilities for responding, when the location of the fire has been made known to the department.

There are, of course, many mechanical and electrical limitations in the matter of turning in prompt, definite and positive fire alarms. Under ordinary conditions, these limitations become more in evidence as a city increases in size, population and value of property subject to risks from fire.

Modern fire fighting appliances have undergone wonderful improvements during the last few years. From the bucket brigade and the primitive fire-pump to the modern water works, extension truck and firetower, is a far cry. In fact, almost the only reminder of the old time service is the singular adherence in some quite large cities to the city hall bell, whose only function, under present conditions, is to summon a sufficient number of spectators to interfere with the work of the fire department.

It was my fortune to be somewhat intimately connected with a very important improvement in fire alarm transmission apparatus; not as inventor or originator, but as one whose duty it was to apply the "breakdown test," without which few if any electrical appliances are of great value. It is not my purpose to go into the technical features of those tests; this tearing

down of ill-considered fabrics, and dissipation of dreams, which is the necessary accompaniment of genuine break-down tests is not pleasant. But I have found that it works greatly to the benefit of the appliance which finally stands up under severe conditions of trial. Now that appliance has stood the better test of four years during which it has been constantly in commission; it has never failed in its functions. I shall, therefore, try to give the readers of the Worker at least a superficial idea of the working of the Standard Electric Auxiliary fire alarm system.

The Standard system is founded on the idea of giving every fire house in the department the quickest notice possible of a fire not only, but the most accurate location possible. Its aim is to notify every fire company of every fire and enable it to respond within the shortest space of time, and to minimize the time devoted to determining the exact location after arriving at the approximate vicinity.

For purposes of administration a central station is provided, through which all alarms pass on their way from the substation to the different fire houses. The alarm is sounded and recorded on a register at the central office, as well as being sounded on a gong and recorded on a tape register at the several fire houses. The action at the central station is absolutely automatic save under exceptional circumstances which will be referred to presently.

From the central station as many different circuits are extended to the fire houses as is convenient and desirable. These circuits each has its own central station instrument, but are so connected by another central station instrument as to cause them to constitute a single line, for signaling purposes.

From the central station additional cir-

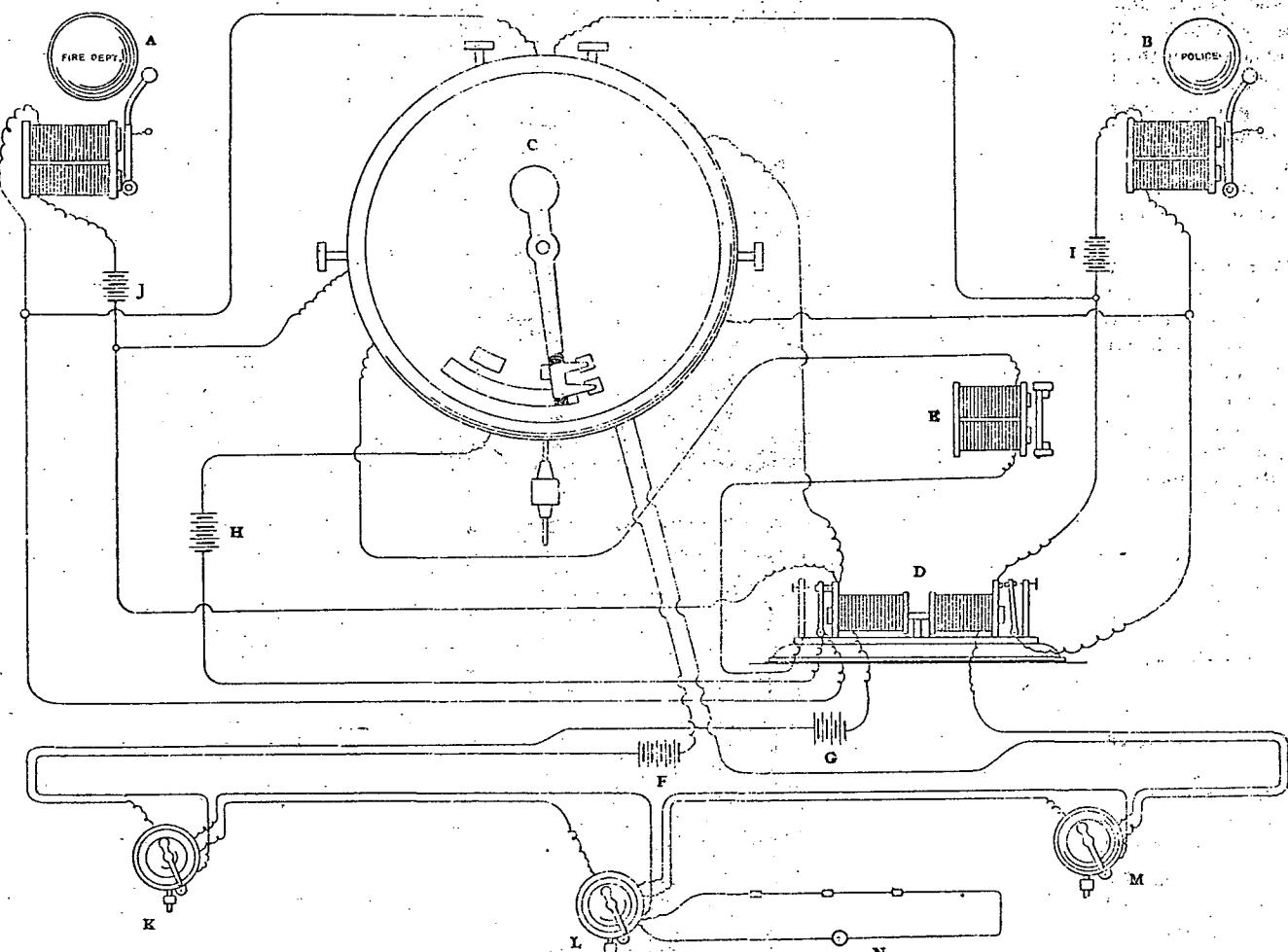
cuits run out to all quarters of the city, and on these latter circuits are placed the substation or signal boxes. These service circuits each terminate in a separate central station instrument of its own; these instruments again being so interconnected that an alarm coming in over any one of the substation circuits, will be at once transmitted automatically to each and every fire house.

The substation boxes are usually placed on the outside of buildings or on poles as may be desirable. They are so constructed that auxiliary circuits can be run from the substation box through a building, and if desirable through a series of buildings in the immediate vicinity. On every floor of a building thus equipped, and sometimes at several places on each floor, are placed manual boxes. These are so constructed that a glass front is removed by pulling a ring, giving access to a push button. In case of fire in any of the buildings auxiliary to a given substation or street box, the glass is removed and the button pushed. This action energizes the street or substation box. In other words: the auxiliary circuit brings the alarm box within the reach of persons in any part of a building, without the delay of going to a street box.

The advantage of notifying the entire department within ten seconds that there is a fire in a given building or group of buildings, needs no argument in these days of quick fire service.

There is an important feature of this system which I fancy is not entirely appreciated by all, even in this city where the system has proved so eminently successful. Now let us see if the function can be explained in connection with the accompanying diagram.

Suppose for instance box 14 and box 28, among many others, is on substation cir-



cuit No. 1; that box 54 and box 62 are on circuit No. 2, and box 43 and 76 are on No. 3. Now the construction of the central station apparatus is such that, should box 14 be energized either directly or by means of one of its auxiliary manuals, and box 28 a fraction of a second later, this would be the result: Box 14 would turn in its alarm through the central station instruments to every fire house connected into the fire house circuits. Then after 14 had completed its alarm, and the central station instrument has resumed its normal position automatically, box 28 would in turn send in its alarm, going to each fire house exactly as No. 14 had done.

But this useful and important feature of non-interference of boxes and non-interference of service circuits does not stop here in the system we are considering. If while a box on circuit one, for instance, should be running in and another on the same circuit be standing pat waiting its turn, two alarms should similarly be energized on another circuit there would be no jumble. Box 43, say, would come in at the central office and record itself on a separate tape register and box 46 would follow in its turn also registering. The operator would then send 43 to all the engine houses by means of his key, immediately following with box 76. Exactly the same condi-

tions might prevail on circuit No. 3 with the same result. Thus you would have six alarms sent in from six boxes all actuated within two seconds, and still each and every alarm reach each and every fire house in its integrity. As installed at present in Rochester three service circuits are thus equipped, although the central station non-interference instrument is constructed to care for eight service circuits when desirable.

When utilized to its capacity therefore, the non-interference switch will handle sixteen different fire alarms all actuated within a given few seconds. The first two as described would go through to the fire houses automatically, and the remaining fourteen be transmitted by key to all of the fire houses.

Still another very important feature of the system under consideration is its auxiliary police alarm feature which is worthy of an extended description, but which can only be alluded to here. The system is so constructed that police alarm boxes or stations are connected into the fire alarm service circuits promiscuously with fire alarm boxes. These police alarm substations have all of the auxiliary or manual house or building adjuncts of the fire alarm substations.

Thus, fire and police substations being

on the same substation circuits, if one or more fire alarm substations be actuated the alarms will be turned in in the manner above described. On the other hand, if as many police alarm boxes be actuated, the same element of non-interference prevails with the very important addition that the police alarms will be sounded and recorded at the central station and will be transmitted to as many police stations as may be desired, but will not be sounded or recorded in the fire houses, while all fire alarms will be sounded at all police stations.

One more feature must be alluded to, and this already too extended paper be brought to a close.

No local batteries are employed, either in the engine houses, police stations, or connected with either the fire or police substations, or the building or buildings connected auxiliary to the fire or police substations. The electrical energy of the system is all at the central station, where it is constantly under inspection and control.

The Standard Electric Fire and Police Alarm apparatus, including the beautiful automatic non-interference switch, is the invention of William W. Hibbard, of Rochester, N. Y.

Figure One represents one section of the central station apparatus with its service circuits and with a circuit to each of the

fire and police departments, with the necessary batteries, all of which are at the central station of the system. References in the diagram are as follows:

A. Engine house circuit with the instrument in all of the houses on the circuit in series.

B. Police station circuit with instruments in all of police stations on the circuit in series.

C. Differentiating instrument at central station; there being one of these instruments for each substation circuit on which fire and police substations or alarm boxes are placed.

D. Compound relay through which signals are transmitted to the central station, to the fire houses and to the police stations.

E. Register for recording alarm at central station.

F. and G. Batteries Nos. 1 and 2 on service or substation circuit.

H. Battery for operating register and tripping differentiating instruments.

I. and J. Batteries on police and fire house circuits, located in battery room at central station.

K. and M. Fire and Police substations, placed on service circuit.

L. Fire or police alarm substation.

N. Auxiliary circuit extending from fire or police alarm substation through a building or group of buildings.

NOTE.—Through the automatic non-interference switch at the central station, any desired number of pieces of differentiating apparatus at the central station, with the substation and fire house and police station service circuits are interconnected, thus securing non-interference of signals and integrity in alarms.

From "Old Crip."

Raton, New Mex., March 5, 1899.

Editor Electrical Worker:

Well, brothers, it's the same old thing out here in the Rockies. We still manage to get our breath from 11 to 19 times a minute, and from one to three squares a day, which I consider is pretty good for Old Crip. I cannot find any news to write about that will be of any interest to the brothers, so I won't try to write much. I am glad to note the start made with the Question Box. Come again, Phil. I would send an answer to the power plant proposition, but there are others that can make it much clearer than I can. The question No. 1 that Uncle Tom proposed in the January Worker, is one to which I have given a great deal of deep thought (when there was no coal in the cellar either).

What has happened to the P. S. of Local 6 of San Francisco? I think the P. S. of Local 4, of New Orleans, was devoured by Louisiana mosquitos. They tackled me when I was there in June, 1897, and had I

not been strapped to my tricycle I feel sure they would have carried me away and devoured me also.

Since my last I have received seven dollars from the members of Local No. 22 as a present, and I surely feel thankful for it. When I was in Omaha last July every member of No. 22 bought a copy of my book. I shall never forget the courtesy extended to me while I was in Omaha.

As I have no news of interest, and as I have to go down to the post office to see if my "New Year's box" has come, I will close with kindest wishes for every member. I am,

Most gratefully,
ROB'T G. WRIGHT.

QUESTION BOX.

Editor Electrical Worker:

In response to the request in last month's Worker for an explanation of the rule that the neutral wire of a three wire system should not be opened, except at the service

switch and on two wire branches, I beg to submit the following:

We take a simple three wire circuit, as Fig. 1, take out the neutral wire entirely and we have a series multiple circuit, two lamps in series, as in Fig. 2.

Before we take another look forward let us take a look backward. In the early days of the incandescent lighting business we used to have 80 volt lamps on a simple two wire circuit, same as are now used for 110 volt circuits in small plants, and for transformer secondaries with a small number of lamps. When these low voltage circuits were run for a large number of lamps, scattered around the two, the "drop" was too great and there was almost no regulation. It was too expensive to put in copper large enough to get around the trouble, and the next step was the old "United States" system with five lamps in series, as in Fig. III. This system used a pressure of 575 volts on the main wires and did away with the big "drop," but it had a defect, which was that when one

FIG. I

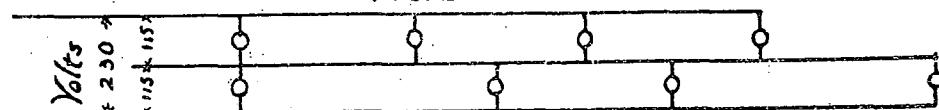


FIG. II

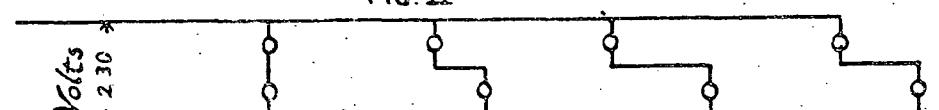


FIG. III

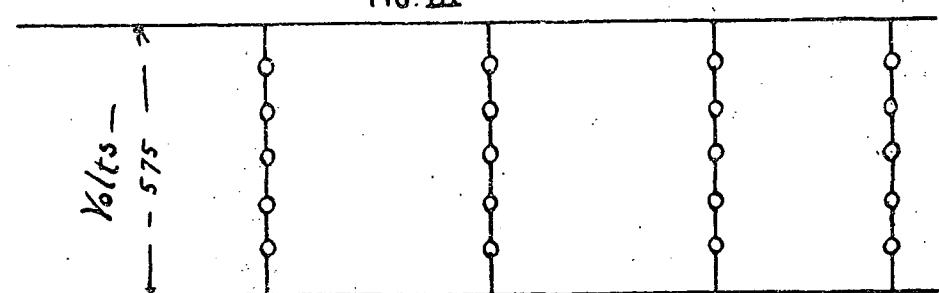


FIG. IV.

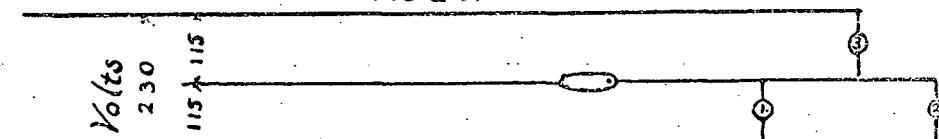
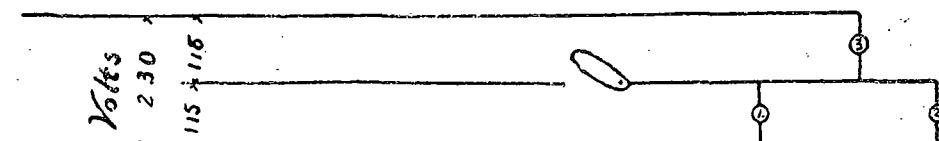


FIG. V



lamp burned out it put four more out of service. Shunt boxes were designed to get around this trouble, but they were not always certain to work. Edison then brought out the three wire system, which made each lamp separate, as in the two wire system, and which used the comparatively high pressure of 230 volts, which did away with the big copper necessary with the two wire 110 volt system. The middle or neutral wire of this system was intended not so much to carry current as to keep the pressure equal on each side of it. Following out this same idea the Siemens Halshe Company have recently put out a system which uses 460 volts on the "five-wire" system, that is, four lamps in series with the addition of three neutral wires, one to keep the pressure equal between each one of the four.

Now to return to the circuit diagrammed in Fig. I we have an equal number of lights on each side of the neutral, and as long as none of them burn out or are turned off there is no current in the neutral, and it would make no difference whether it was opened or not, but let one of the lamps be turned off or burn out and conditions are changed at once.

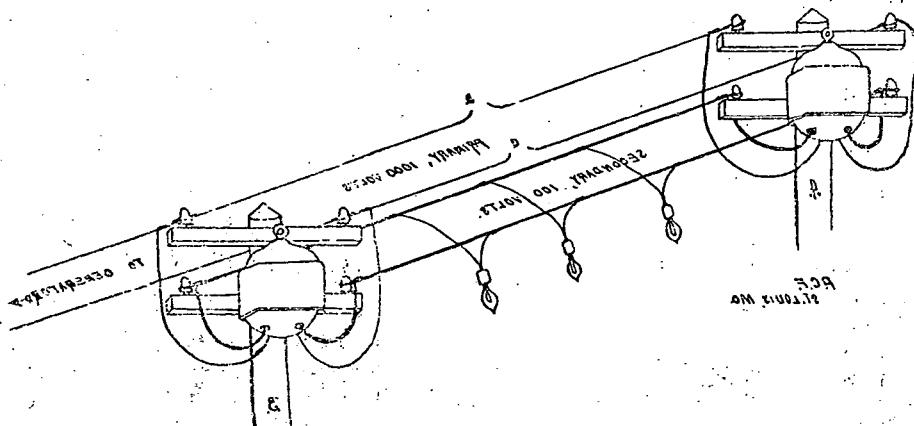
We will now suppose that there are three lamps burning, as in Fig. IV., the current going through No. 1 and No. 2 must either go through No. 3 lamp to the other outside wire or return to the station or transformer through the neutral. What really happens is that the current divides and half of it goes through each of the two ways mentioned, provided the neutral is not opened. But under these conditions, if the neutral should be opened, as in Fig. V., the whole amount of the current passing through No. 1 and No. 2 has only one path to get back to station or transformer, and that is through No. 3. Consequently No. 3 will get much more than it wants and No. 1 and No. 2 will not get nearly as much pressure as they should have, and if No. 3 should be turned off, No. 1 and No. 2 will be put out also. If there should be any more lamps than No. 1 and No. 2 connected to the same outside wire and to the neutral as they are, each one added increases the current in the neutral, and if the neutral should be opened decreases the pressure on their side and increases the pressure on the side No. 3 is connected to. If any of the readers of the Worker are not familiar with the operations referred to, I would suggest that they wire up about five lamps, two on one side and three on the other side of a three wire circuit, and when they are all burning open the neutral and notice the effect on the pressure, and they will at once see the reason for the rule referred to above, and also the rule which is in force in many plants that the neutral plug should be twice the size of the outside plugs.

In the cases shown in the diagrams in this article the polarity of the wires has not been taken into account, but the lamps have been considered in all cases as standard lamps of 16 c. p. and 115 volts.

Very truly yours,
FRED FISH.

five cents each way) in testing out and tagging each wire at both ends of the cable, returning with magneto to the east side when complete. Describe in detail each successive step in method of testing.

Respectfully submitted,
LOW T. SUTTON,
Local No. 1.



Two transformers, with secondaries connected in multiple as shown in diagram, have the primary circuit broken at C and D.

Will a lineman working with the wires at the top arm on pole A be liable to receive a dangerous shock?

The actions and connections of transformers for different voltages, boosters, etc., is a very interesting subject, and might, with profit be discussed under proper "order of business" at meetings.

An incorrect opinion regarding the action of transformers as shown in diagram might result seriously to a brother making the mistake.

Fraternally,
P. C. FISH.

Buffalo, N. Y., March 3th, 1899.

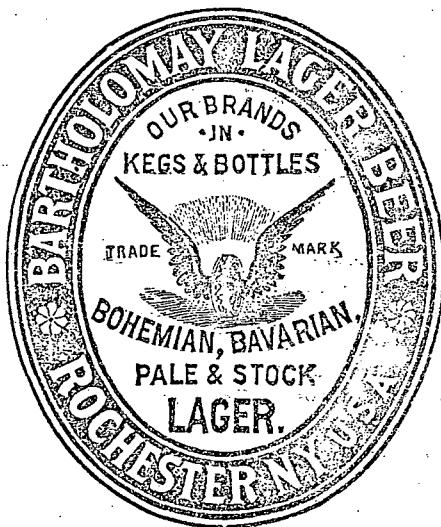
Are helpers a benefit or a detriment to a Local Union, and how long should they work before becoming members?

Fraternally yours,
H. M. SCOTT,
Local No. 41.

St. Louis, March 2, 1899.
Editor Electrical Worker:

Below you will find a little conundrum which I would like to appear in this month's Worker. It is rather interesting and I would like to have some of the boys figure it out.

The ability or ingenuity of a man for testing under following conditions may easily be determined by the amount of bridge fare used. At directly opposite points on the east and west side of a river is located the two respective ends of a seven (7) wire submarine cable. Standing at the east end with the following: 14 paper tags, two No. 1, two No. 2, two No. 3, two No. 4, two No. 5, two No. 6, two No. 7, and a magneto bell, how much bridge fare would be necessary (fare being



Rochester Gas and Electric Co.

OFFICES:

62-70 Mumford Street.

PRICES OF GAS STOVES
AND
ELECTRIC CURRENT
Furnished on Application.

AN ELECTROSTATIC PAIR.

He was the gallant engineer
Of a giant dynamo;
She sang to the wires the whole day long
With a chorus of "Hello!"

He loved this telephonic maid,
Till his heart's vibrating plate
Was magnetized and polarized
At a milliamperic rate.

His love he well expressed in ohms,
And amperes, or even in volts;
In voltaic phrases and dynamo figures,
Or currents, arc lights and bolts.

Said he: "By the great broken circuit,
Or more, by the Ruhmkorff coil,
Your negative answers will drive me
To some subway under the soil.

"Not a spark of inductive affection,
Not a positive 'Yes' have I had;
I'm afraid the wires have grounded
In favor of some other lad."

Then regret, like a galvanometer,
Or an astatic needle, it smote her,
And she said: "Of love I have ions
As strong as an Edison motor."

So he opened the circuit and clasped her
In arm-ature, and held her there;
And she was the belle electric
Of this thermo-electric pair.

—Hardware.

In Memoriam.

St. Paul, March 9th, 1899.

Resolutions adopted by Local Union 23,
St. Paul, Minn., on the death of Bro. John
Gallagher:

Whereas, It has pleased Almighty God, in His infinite wisdom, through his earthly messenger, inexorable death, to visit us, and under extremely sad circumstances removed from our midst our esteemed brother member John Gallagher, and

Whereas, The intimate relation held during a long electrical and social career, by our deceased brother with the members of this union, makes it our solemn duty to express our esteem for his manly worth and our deep sorrow at the loss, and of the still heavier loss sustained by those nearest and dearest to him, therefore be it

Resolved, That the sudden removal of such a brother from our midst leaves a vacancy and shadow that will be deeply felt by all members of the union and his friends, and be it further

Resolved, That with deep sympathy with the afflicted relatives of our deceased brother we express an earnest hope that even so great a bereavement may be overruled for their highest good; and be it further

Resolved, That these resolutions be spread upon our minutes and our charter draped for a period of thirty days, as a testimonial of the respect and esteem in

which our late lamented brother was held by his fellow members, and a copy to be placed in the Electrical Worker.

FRANK VOLK,
HERBERT DAVIS,
MICHAEL LENIHAN,
Committee.

OLD AGE.

It has long been observed as one of the contradictions of human nature that there is one goal that we all hope to reach, which, nevertheless, we strive mightily to escape approaching; and vainly back water against the stream that bears us thither. This goal is old age. Old age is a beautiful and venerable thing, in whose behalf many wise and eloquent men, like the good Cicero, have written pleasing volumes of praise. This Ciceronian sort of old age refers to the declining years of the well-to-do. There are compensations for one who can gather about him the young people and with the privilege of his white hairs be garrulous about a world they have not seen, telling of the famous men he has met and heard, the old places that have long been changed, the adventures that advancing civilization has rendered impossible, the hardships and the pleasures of a gone-by generation. All this is sweet, but only for him with whom there still abides the "splendid shilling."

To the poor man, old age is a terrible and incurable malady, eating up his slender savings and rotting away his strength and skill. In the cold words of the economist, "modern industry does not favor the aged or even the elderly," which, being interpreted, means that the old man is pushed aside. The employer grudges him the standard rate of wages, the union will not let him take less. He cannot work with his old speed; his hours of sickness are more numerous. Once out of work it is difficult for him to get back.

In some employments his case is much worse than in others, as where he works in the hold of a grain ship, and becoming like a broken-down horse is familiarly known as a "knacker." But in all employments the aging workman has a sad prospect. The economists, having collected their relentless statistics, have woven them into charts and diagrams with curved lines, which show in various trades how a man's wages rise and fall throughout life.

These lines run almost straight across the age columns from 25 until they reach 50 or 55. Then the curve begins; and turning downwards the wage line runs lower and lower, until at 70 it has run out into nothingness. These economic diversions are entertaining but are not encouraging.

The chances of a workingman's being able to save enough to provide for an old age of comfort are well summed up by the author of "The State and Pensions in Old Age," Mr. J. A. Spender.

"The average man who has had a family, who drinks a little, smokes a little, and indulges himself in certain of the minor luxuries which help to make life go smoothly, looks forward to a very lean period at the end. Among the working class the problem of saving sufficient for old age depends mainly on four conditions: (1) regular work; (2) a managing wife; (3) a moderate family; (4) sobriety. The absence of any of these conditions may mar the best efforts in other directions and the presence of all four means such a combination of circumstances and character as

we cannot generally expect to find among average men and women of any class.

Brothers, what are we going to do with our old members, are we going to force them to work for the same scale of wages as younger men, are we going to try and force employers to pay them the same wages as he can get younger men for, or would it not be better to let them work for what they are worth? The above was taken from the official organ of the Independent Order of Foresters. I would like to have this matter discussed in our next convention. There can be no doubt that a lineman who has passed the age of fifty or sixty years cannot keep up with the young bloods, and should be given some consideration, otherwise he may be forced out of his trade into a more menial position, where if he was allowed to work for what he was worth he may still retain his position and be an honor to the union and to himself.

PSALM OF THE WORKMAN.

By Stephen S. Bonbright.

I.

I know not whose land I will die on,
Nor where my weary feet shall trod.
By the sweat of my brow I am living,
My hereafter I leave to God.

II.

I was not the cause of my being,
Nor know I the life that's to come,
Without consultation I'm living,
Like sheep before shearer is dumb.

III.

A pilgrim, I wander life's journey,
Without faith, or hope, or a friend,
Awaiting that most joyous moment,
When the mystery of life shall end.

IV.

I was born with hope and ambition,
They grew like the fair light of day,
Till time that a "saving" (?) invention
Swept the need of workmen away.

V.

The child does the work of the parent,
Our dear homes, once healthful and free,
Are now scant and painful to live in,
Crowded with woe and misery.

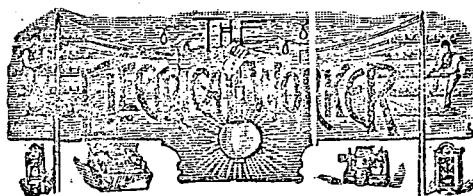
VI.

He who has gold to-day is master,
He who must earn it but a slave,
He who has gold lives in a palace,
While its builder is marked a knave.

VII.

Oh, when there comes the day of reck'ning
Of the sins of man toward man,
There will be more tumult in hades
Than since the devil's reign began.

I verily believe that the earth in a year produces enough to last for thirty. Why, then, have we not enough? Why do people die of starvation or lead a miserable existence on the verge of it? Why have millions upon millions to toil from morning to evening just to gain a mere crust of bread? Because of the absolute lack of organization by which such labor should produce its effect, the absolute lack of distribution, the absolute lack even of the very idea that such things are possible. Nay, even to mention such things, to say that they are possible, is criminal with many.—Richard Jeffries.



OFFICIAL JOURNAL OF THE

NATIONAL BROTHERHOOD OF ELECTRICAL WORKERS.
PUBLISHED MONTHLY.

H. W. SHERMAN, Publisher and Editor,
731 Powers Bldg., Rochester, N. Y.

Entered at the Post-Office at Rochester, N. Y.,
as second-class matter.

EXECUTIVE BOARD.

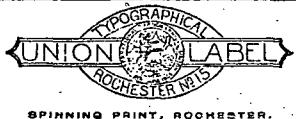
Grand President—J. H. Maloney,
451 W. Congress St., Chicago, Ill.
Grand Secretary—H. W. Sherman,
731 Powers Bldg., Rochester, N. Y.
Grand Treasurer—P. H. Wissinger,
741 W. Fayette St., Baltimore, Md.
First Vice-President—Theodore Gould,
11 Wareham St., Boston, Mass.
Second Vice-President—C. H. Adams,
2901 Summit St., Kansas City, Mo.
Third Vice-President—Thomas Forbes,
1104 Thirteenth St., Detroit, Mich.
Fourth Vice-President—S. M. Keeble,
2816 Rutgers St., St. Louis, Mo.
Fifth Vice-President—R. P. Gale,
1210 A Broadway, San Francisco, Cal.

Subscription \$1.00 per year, in advance.

As The Electrical Worker reaches the men who do the work and recommend or order the material, its value as an advertising medium can be readily appreciated.

ROCHESTER, N. Y., MARCH, 1899.

W. N. Gates, Special Advertising Agent,
29 Euclid Avenue, Cleveland, O.



A short time ago Local 55, of Des Moines, Iowa, struck against certain unfair conditions which existed there. During the difficulty W. Boze and O. C. Boyd scabbed on the job and are consequently on the blacklist of the Brotherhood along with others who did the same during the strike of No. 3 in St. Louis.

Men Who Scabbed In St. Louis During No. 3's Strike.

MISSOURI-EDISON.

| | |
|------------------|-------------------|
| *Jno. McGann. | *Frank Kelly, |
| *L. Baldwin, | *Dick Harris, |
| *Chas. Addleman, | *Harry Murphy. |
| *Joe Edwards, | *Frank Maher, |
| *Joe Aber, | *Walter Baldwin, |
| Geo. McLaughlin. | Harry Swarthling, |
| Fred Schantz, | Toni Watts, |
| Jack McCune, | Jim Carr, |
| Bill Kelly, | Tony Burke, |
| Lee Cassavant, | Frank Burns, |
| Frank Widoe, | Tim Murphy, |
| Jas. Murphy, | Chas. Pipes, |
| Rube Smith, | Del. Scott. |

BELL TELEPHONE.

Chas. Phillips, Bill O'Dell,
Geo. Johnson (scabby) Noah MacLamore,

Frank Gocus, L. Hull,
*Mike Cunningham, Jim Breen,
*Chas. Johnson, Fred Obermiller,
Frank Haverstraw, Bill Gillin,
Jack Carson, Andy Gamble,
Ed. Warentine, Al. Hayslip,
Bill Ogle, John Simons,
Jno. (Baldy) Hamble John Eiker,
Jno. (Heckery) Darrah, Wm. Ingstrom,
Henry Casey, *Dick Lewis,
Wm. Taben, Ferry Marion,
B. S. McCloskey, Jno. Date,
W. Davison, D. Davison,
W. G. Fry (better F. Burmeister,
known as Rube) J. Powers,
J. Davison, C. Fuller,
W. Cleeland, Chas. Reynolds,
W. Batterton, J. Hall.
KINLOCH TEL. CO.
B. Albaugh, Frank Lewin,
Ed. Holman, Adolph Meyer,
Frank Turner, A. Dock,
Henry Hisserich, Ernest Denison,
William Stewart.

An asterisk (*) before a name indicates that the scab was a member of the union.

Electrical Inspection and Examinations.

Referring to the January letter of Press Secretary for Local No. 75, where he says the inspection of electrical work answers the purpose better than the examination of wiremen, because the inspection is a constant check on poor work, I believe the brother might have justly praised the inspection without discrediting the examination. They are both means to the same end, which is perfection in electrical construction.

The value, to the wiremen, the contractor and the property holder of a well posted, practical, fearless inspector, to constantly supervise each piece of work is well known and admitted.

But this fact does not in the least detract from the merits of an examination upon the subjects under consideration.

Being a member since its inception in this city in 1897, of the "Joint Examining Board," consisting of two electrical contracting engineers, two members of the union and one underwriters' inspector, my opinions are based upon observations made during this time.

I believe that an examination conducted upon proper lines to be of great value to the inside wireman, and of benefit to the public in general. An examination is not a cure for all the ills pertaining to the trade, but it is a step in the right direction and should be encouraged by every union man.

The examination of inside wiremen as interpreted by our examining board consists of questions (both oral and written) upon the following subjects:

1st. On the rules and requirements of the National Board of Fire Underwriters.

- 2nd. On practical work.
- 3rd. How to calculate wire sizes.
- 4th. Bell work, including telephone, clock, signal, alarm and other work.
- 5th. Switch wiring, (different control, combinations, etc).
- 6th. Motors and generators.
- 7th. Miscellaneous.

The theoretical being avoided as much as possible, our primary object being to test the candidate's ability as a practical wireman.

That the efforts of this examining board have not been without gratifying results is attested by the noted improvement in construction work reported by inspectors.

The pride with which our brothers show their "certificate of examination" when occasion requires is ample evidence of the regard with which they are held.

Education being one of the requirements of our constitution, there is nothing that will induce a man to read, study and think more than a compulsory examination.

In conclusion will say that great care in preparation of questions should be exercised by men composing an examining board.

Owing to the wording of a question, it is sometimes difficult for a candidate to understand what it is desired he should tell.

A question must contain enough conditions to permit of a definite answer.

P. C. FISH,
St. Louis, Mo.

THE LITTLE DINNER PAIL.

In the morning gray, along the street,
I hear the tramp of many feet,
And hear the friendly hail,
"Good morning John!" "Good morning,
Bill!"
As on they trudge to shop or mill,
With little dinner pail.

With little dinner pails they go,
Through mud and rain, through slush and
snow,

Weary in manly way—
Wearing as king wears kingly crown,
The toilers' garb of blue or brown;
For very kings are they.

Who, brave of soul, with cheerful face,
Are faithful in the lowest place

That duty calls them too;
Who, for the home, the weans, the wife,
Grow gray with care and stern with strife,
Keeping the heart-beats true.

Such men—God bless them! Cities need—
Men great in thought and strong in deed,
Knowing no word like "fail";
Then off your hat what time you meet,
The man who carries down the street
The little dinner pail.

—Pemoa Grit.

THE WISEST OF ALL MEN

once said, "Of making many books there is no end." For practical books on all subjects our readers should write the great publishing house of Laird & Lee, Chicago, Ill., whose announcement will be found on page 15 of this paper. Look it up; it may pay you to do so.

OUR LOCALS.

Local Union No. 4.

New Orleans, Jan. 7, 1899.

Editor Electrical Worker:

After so long a time of inaction of the members of the craft in this neck of the woods, it becomes my pleasing duty to inform the Brotherhood through the medium of our national journal that No. 4, the old Banner Local of the South, lives again, under the guidance of Mr. Andrews and some hard rustling of many old heads too numerous to mention.

No. 4 bobs up with 84 charter members, and it is hard to estimate to what extent in numbers we may attain during the winter. The local is strictly for linemen only, and meets every Saturday at 7:30 p. m., corner of Perdido and Carondelet streets.

Following is the list of officers for the ensuing term:

President—Ed Andrews.

Vice-president—Tim Cronin.

Treasurer—Ed Taylor.

Financial Secretary—Jas. Sullivan.

Recording Secretary—Chas. Potter.

Press Secretary—Harry Smith.

After the lapse of so long a time as No. 4 has lain dormant it is needless to remark the pride the brothers feel at once more being able to appreciate the advantages of a united craft. We feel and know, in fact, that if we would be a strong organization we must first be masters of our own selves. As the old saw goes, man, know thyself; pretty good advice, and after the acquaintance becomes well established we discover we are not much as individuals, and, consequently, our first duty is self-education. Errors committed in the past should not be repeated in the present. It is high time we became something permanent. If we are to blow ourselves to the last bean for booze when times are good, it is very natural when work is finishing up we become easy victims to the paring down process always adopted by companies when opportunities present themselves. It appears to be the determination of the majority of No. 4 to make this move a permanent and solid organization. We aspire to possess a building, and believe the opportunities were never better than those presented here for accomplishing our purpose. We number 84 at present, and would say strong, but I do not wish to presume until we can make a little history just what the possibilities are. The Cumberland have ten gangs in this neighborhood; People's Co. two gangs; Traction Co. employing all the linemen they can get. This is the extent of present line work. The prospective work for this winter is the following: Power plant for distribution of

the juice to operate twenty-two pumping stations to drain the seepage and incidentally pump the sewage from this village. In all about 500 miles of feeders to build complete. The city has appropriated \$27,000 for the improvement of their two systems; the Traction Company has 2,000 new poles to set and the complete rearrangement of tracks on Canal street. N. O. & Carrollton have a year's work for one gang. The proposed Merchants' Light Company say they will be in shape to accommodate customers by May 1st. Fifteen different outfits are going underground this winter. This is the situation as I have got it. The boys have been coming in pretty fast, but have usually been placed in a short time. At present no idle men and a fair demand for the right sort. To be explicit this is the wrong village to strike if your credentials won't bear inspection. Well, brothers, I had probably better jar loose, as I fear I have already said too much for one's maiden effort. However, I have no apologies to make.

Fraternally yours,

HARRY SMITH,

Press Secretary.

Local Union No. 5.

Pittsburg, Pa., March 8, 1899.

Editor Electrical Worker:

From all appearances things are booming around in the vicinity of Pittsburg, because union men and non-union men are hard to get at any prices. We hope it will continue this way, then possibly some of the members who have fallen back will get a hump on, and possibly we will be able to land some new men on the line and introduce the mysteries of our new invention, and I tell you it's good. I saw some get it, and it only costs \$10.60 to get it. I would advise all outside the portals of No. 5 to get in line, for by the first of May it will be \$26.00

Everything is progressing nicely with our ball, the decorations and refreshments are placed in the hands of competent committees, and as they have been there before we are confident of success. The tickets are being snapped up everywhere, as the public in general knows that when electricity is connected to anything it is bound to go.

We are glad to note that many of the electric firms are with us, and our agreement is in harmony, and a reasonable one, which will take effect the first day of May. Many of the firms have found out that it is cheaper to pay \$2.50 to a good man than \$1.50, \$1.75, \$2.00 to a cheap article of a bungler, and now all they will have to do is to sign the agreement, as they have given it a fair trial for at least six months, without being forced to, because they have had better results from union men. Now we want a mutual affair,

and we know by the past that it will boom prices for us both in the future.

We are sorry to note the illness of Bros. Albert E. Eldridge and Fred Willesden, both good workers for our local. This is the time the local is of some good, and we stand by our brothers as we expect them to do by the union. When you compare the union with some other beneficial organizations it ranks equal, because it protects in sickness and accident, and also in death, and in health it is an instructor in applied electricity, and also in the means of keeping all the brothers in touch with work, so that employment is more possible in the order than out, as our duty is to the family first, others second, but get in line they must if they continue. It is fair to assist one step and then for them to appreciate the kindness if eligible to be one of our number, and help carry the standard for honest men at honest wages.

We would like to see more of our brothers turn out at the meetings. It is your duty as well as your privilege. If you haven't the long green to pay up, come down to the meetings; it will do you good. If you have a kick come down, as there are plenty to help you kick. We like to have your faces there. By all means possible try and be present, and don't let money or trouble with anyone keep you away. There's where you make a mistake. Come down and we will talk it over and see what we can do for you. Again I repeat, don't stay away; come, and while you help yourself you will help us. It is a mutual aid to each one; be at your place where duty calls you; remember your obligation and stand by it like a man; come and help us run the thing, and you will be surprised how much better it goes when you are there than the false reports you may have possibly heard. Come and know for yourselves. I appeal to you as brothers to do your full duty as near as possible.

Yours fraternally,

J. H. STOUFFER,
Press Sec.

Local Union No. 6.

San Francisco, Cal., Feb. 12th, 1898.

Editor Electrical Worker:

I hope I am not too late to get a few words in edgewise for No. 6. Well brothers new officers are as follows:

President—T. J. Cameron.

Vice-president—George Sittman.

Recording Secretary—A. A. Whitfield.

Financial Secretary—R. P. Gale.

Treasurer—George Keatty.

Press Secretary—T. D. Connell.

Inspector—C. Baraco.

Foreman—H. A. Hilton.

Trustee, 18 months—T. D. Connell.

Trustee, 12 months—Charles Starks.

Trustee, 6 months—H. A. Hilton.

Bro. R. P. Gale, was nominated to fill the vacancy caused by Bro. E. Rush, one

of our former Grand Vice-presidents, and a confirmation of our nomination has been received from the Grand Lodge. Bro. Rush is at present in Alaska, hunting gold nuggets.

Bro. Walter Bently has just recovered from a bad attack of sickness and is able to be on his feet once more, as is Bro. B. Baraco, who is now convalescent after a couple of weeks siege of sickness.

No. 6 has applied to the Grand Lodge to open her charter on March 1st and we are waiting for the confirming answer from our Grand President.

One of our former brothers, Sherman Lizenby, a lineman in the employ of the Pacific Tel. & Tel. Co., had a terrible fall from a 45 foot pole at the corner of Broderick and Clay streets in this city, about two weeks ago, fracturing his right arm and wrist in four places, his left arm and wrist in three places, his left foot twisted at the ankle, making a bad sprain and fracture, also fracturing the heel bone at the point of the heel, the right foot is badly sprained. He has a large contusion on the point of his right thigh bone and a hole in his forehead above the right eye. Still the brave fellow lives through it all. I saw him last night and his doctors say he is doing much better than they expected. Their verdict at the time he was hurt being that he could not live ten hours. Only a few months ago he was in good standing with us. We should all take this as a lesson and keep our dues paid in advance. Lizenby is an experienced man and a first class lineman. He received no electric current, but simply fell, no one knows how, even himself. Although he does not believe he fell over thirty-five feet, where the fire alarm arm is, the telegraph line being on the top arm of the pole. The fact that he struck the pavement at or within a few inches from the edge of the curb of the sidewalk on an iron casting studded with stars, accounts for several hurts, but how he got them all probably no one will ever know as no one saw him fall.

Fraternally yours,
T. D. CONNESS.

Local Union No. 12.

Greater New York, March 6, 1899.

Editor Electrical Worker:

We should like, through the medium of the Worker, to express the general satisfaction and confidence felt towards the new officers. Our new president, with a characteristic trait of his, has shown his worthiness to the honor of being seated in the presiding chair by his unselfish interest in the welfare of this local. Before he was thought of as a presiding officer he exemplified his value to us by becoming a foremost character in almost every effort interesting our welfare. Bro. W. W.

Vaughan has proven himself fully capable of holding the Indians in check.

The untiring hustling of our business agent, Bro. Robert H. Speirs, since he assumed the arduous task of looking after the external welfare of this local has shown his ability by what he has thus far accomplished, and I am sorry to state that at our last communication, the 1st inst., he resigned to resume toil at his old vocation. He has the well wishes of all the brothers. No new officer has as yet been chosen to fill the vacancy.

Our recording secretary, Chas. L. Rogers, and our financial secretary, F. G. Ott, are kept busy and have their books in splendid shape, being able, at a moment's notice, to give details upon any previous subject.

Our treasurer, A. O. Hokenson, has resigned, and Bro. Davis has been chosen in his stead. If I should continue by enumerating the merits of our minor officers I am afraid I would only be adding fuel to the fire, thereby resulting in swelled heads, possibly to their final discomfort, which was the finale of a previous officer of this local, I am sorry to admit. However, I will go thus far and acknowledge that all holding in their care the welfare of this local, whether it be elective or appointive, have shown their zeal by their unremitting endeavors.

Fraternally yours,
JOHN DEAN, JR.,
Press Secretary.

Local Union No. 17.

Detroit, Mich., March 6, 1899.

Editor Electrical Worker:

As No. 17 has accepted my resignation as Press Secretary but failed to appoint my successor, it will be necessary for me to intrude upon your space once more. We established a precedent when we were organized seven years ago that has been zealously followed, never to miss a copy of the Worker without giving to our brothers throughout the land a word of cheer and encouragement, and, while they have not always been couched in the purest Angl-Saxon, the source from which they emanated has always been that of the consistent trades unionist, ever ready to lend a helping hand to those less fortunate than ourselves, and by adding our word of encouragement each month spur them forward in a more determined effort to make our Brotherhood the foremost labor organization in the country.

I am highly gratified and somewhat amused to learn that some of the locals are favorable to the amendment I introduced at our last convention to make our Brotherhood international, inasmuch as most of its advocates at this time were its most persistent opponents at the convention. It would be interesting to learn the reason for their change of heart. When I introduced that amendment at our last

convention the delegates became so loud and eloquent in their opposition to it that Bro. Wheeler's afternoon nap was sadly disturbed, and they jumped on me so hard that I fell in my chair in a state of collapse, gasping for breath and, when I recovered sufficiently to remonstrate, I found that it had been unanimously defeated, and Bro. Breese sat quietly smiling at my discomfiture. Now he is one of its most earnest advocates. Verily it is true, "Consistency thou art a jewel."

The query column department that was added to our esteemed journal last month will, no doubt, be highly appreciated by those of our members who are of a more studious turn of mind, and while, no doubt, most of the questions will be catch questions, that we would not probably encounter in our usual work twice in one hundred years, yet they will have a tendency to whet the appetite for a more thorough education on electrical subjects and cause the members to delve deeper into the mysteries that surround their every day life. I do not agree with "Pittsburg" that the local matter contained in the correspondence of the different locals should be entirely eliminated and its place taken up with the dry data and algebraic quotations of electrical subjects, for a large part of our membership look forward with a great deal of interest to the date of publication of our journal for the purpose of taking note of the condition of work in other cities, that they may know where it is most profitable to apply in case of slackness of work in their own cities. The object of Pittsburg's suggestions are commendable, but hasty improvement creates a boom that is always followed by a reaction, which always proves disastrous to any undertaking. What we want is slow, methodical, permanent improvement, and if our journal continues to improve as it has in the last few years I predict for our Brotherhood the very best trade journal in the country in a short time.

Work is brisk in Detroit just now. The Michigan Tel. Co. will rebuild its entire exchange during the next year. It contemplates placing twenty gangs throughout the state within the next month. As a result, the city is flooded with "dubs" that can climb the poles with the handles on, but cannot make much headway with them "climb up things" on. These are conditions that we all must face, and No. 17 will, no doubt, take care of them in due course of time.

Journalism is not my forte. I would sooner handle a bar (crowbar I mean), than a pen any day, so I will endeavor to induce No. 17 to appoint my successor at their next meeting and place the arduous and exacting duties of Press Secretary in more competent hands.

JOE BEDORE.

Local Union No. 18.

Kansas City, March 1, 1899.

Editor Electrical Worker:

Bro. John Castellon has left us to take the position of construction foreman for the Southwest Missouri Electric Company of Joplin, Mo. Bro. Castellon has promised to hire none but union men on all of his work.

I see that Bro. Stauffer, Press Secretary of No. 5, says that they had some cold weather in Smoketown. Well, I don't know. The writer of this had to wrap his body with asbestos, and wound a lot of German silver wire over that, and connected it to two binding posts, one on each shoulder, so when I was at work I could put myself in circuit with the current. That was the only way that I could keep warm. It was only 25 below zero here.

I see that some of the Press Secretaries are agitating the question of making our brotherhood an international one. Well, why not? Our brothers over the line ought to be affiliated with us. At our next convention at Pittsburg this question ought to be brought up for action. Canada is not so far from us that we should think that our brothers across the line could not help us if we needed their help, or that we couldn't help them if necessary. So let us all try and get this question before the next convention for favorable action. I shall do my little part.

Well, No. 18 is on the boom again. We are adding new lights at every meeting now. We are going to lose some of our oldest members though when No. 2 gets started here. All of the linemen are going to drop out and go to No. 2. Well, wish them all kinds of good luck. They are starting with thirty-five members. All of them first-class men and workmen,

Bro. E. C. Moore has come back amongst us. He has been sick with a bad case of grip. We were all glad to see his smiling face again.

Bro. F. A. Warner, Press Secretary of No. 68, dropped in to see us while on his way east. We gave him the glad hand, and tried to make him feel at home while here. Come again, Bro. Warner.

The business agent of the Building Trades Council collected \$15.50 for us with applications for five members. I want to say right here that Bro. Russell is a hustler. Since his election to that office he has turned in over \$150 to the different unions affiliated with the B. T. Council.

Our city council has granted the Brooklyn Ave. Electric R. R. Co. franchises to run on Grand avenue and other streets in our city, they to give the city 2 per cent. on all business done east of Grand avenue, and free passes to the mayor and members of the city council. Before the franchises were granted a committee from the Industrial Council waited on the City Council

and tried to get them to insert in the franchise a clause to grant a four-cent fare, 25 tickets for \$1.00; also to run owl cars, but the council would not do so. Then the committee waited on the mayor to try and get him to veto the ordinance, but could not see the mayor, as he was not at his office. I will enclose a copy of what the city got and what it granted, so you can judge which got the best of the bargain. I think the city got soup.

Well, I guess I had better close the circuit for this time.

Fraternally yours,

HARVEY BARNETT,

Press Secretary.

WHAT THE CITY GOT AND WHAT IT GRANTED.

The concessions made by the Metropolitan Street Railway to the city in the franchises passed by the council Monday night, are:

Transfer privileges on all lines.

Two per cent. of the gross receipts on business originating east of Grand avenue.

Erection and maintenance of a steel bridge over Agnes street.

Extension of the Brooklyn avenue and northeast lines of two blocks each.

Waiver of claims for damages caused by grading. This applies to Tenth street from Grand avenue east.

Steel bridge over the Belt Line at Brooklyn avenue.

The equipment to be equal to any road in the United States.

Passes to the mayor, council and city officials.

In return for these concessions the Metropolitan gets an exclusive franchise on Grand avenue from Third to Thirteenth streets.

The extension of the Brooklyn avenue and Northeast franchise to 1925, when the other Metropolitan franchises expire.

The Eighth street viaduct franchise.

Franchise on Broadway from Fifth to Sixth streets.

Local Union No. 19.

Atchinson, Kan., March 7th, 1899.

Editor Electrical Worker:

No doubt ere this you have heard that the office of Labor Commissioner in Kansas has been taken out of politics and is now elected by the delegates from local unions over the state. At the recent convention held in Topeka, Feb. 6th and 7th, Mr. W. L. A. Johnson was elected commissioner, Mr. W. L. Holcomb chief clerk. The legislative committee elected by the convention were W. J. Blain, of the salt workers union of Hutchinson, W. H. McClusky of the mine workers of Yale, and F. J. Roth of the electrical workers of Atchinson. This committee was ordered to go to work at once at the legislature under the instructions of the officers of the state society to secure the passage of a

number of bills indorsed by the convention and have been working steadily since and with a considerable degree of success. The following bills have been prepared and caused to be introduced in both house and senate.

Bill providing for a free employment agency under the supervision of the commissioner of the Bureau of Labor and Industry.

Bill providing for safety catches on cages and elevators in coal shafts.

Bill prohibiting the employment of children under 14 years of age in factories and workshops, etc.

Bill requiring the products of convict labor to be branded as such.

Bill providing for chairs, seats, etc., for females employed in mercantile establishments when not actually engaged in their duties.

Bill prohibiting employers from coercing or influencing or making requirements of employees, servants, laborers, and persons seeking employment, otherwise known as a "personal liberty" bill.

The following bills have had the active support and assistance of the legislative committee:

Bill for the protection of employees from unjust accusations made by detectives and spotters and special agents.

Bill restricting the output of coal at the penitentiary to the state institutions.

Bill regulating the practice of the barber profession, and creating a state board of barbers, etc.

Bill making mine inspectors of weights and measures at coal mines.

Bill to compel the payment of wages for labor in lawful money of the United States.

A number of these bills have passed the senate, and most all have received a favorable recommendation from the various committees to which they were referred. The committee has used their influence successfully in preventing the passage of a number of other measures inimical to and against the interest of labor.

Believing this is the only state where office of commissioner of labor is out of politics and elected by the working men direct I offer the above.

Lawrence, Kas., is figuring on doing away with its hay burners and building an electric road.

There is also an ordinance pending before the city council in Topeka, for a new telephone franchise.

Bro. F. J. Roth returned from Topeka to-night. We are also in receipt of a letter from Harry Haywood, from New Orleans, La., also one from Buck Wagner, Wichita. Keep the ball rolling Buck and you will get them all in.

Yours fraternally,

E. J. M.

Press Secretary.

Local Union No. 23.

St. Paul, Minn., Feb. 20, 1899.

Editor Electrical Worker:

It is the first time since our local has been reorganized that we have been called upon to chronicle the death of one of our brothers, and it is with sad hearts we notify you of the death of our dear Bro. John Gallagher, one of our first members, and one who was loved and respected by all. On the 10th of this month, while doing some wiring, he slipped and fell, striking on his head. He was removed to St. Joseph's hospital, where he died Thursday, February 16th, at 8 p. m. He had been employed by the N. W. Tel. Co. for about three years; was a good workman and kind and trusty friend. He leaves no relatives here to mourn his loss, but a host of friends; was a member in good standing of L. U. No. 23, and will be missed from our meetings and gatherings.

Fraternally,

A. H. GARRETT.

St. Paul, Minn., March 7th, 1899.

Editor Electrical Worker:

At the last meeting I was elected Press Secretary and now proceed to let you know how No. 23 is getting along. At the present time we are in mourning over the death of charter member Bro. John Gallagher, who, on the 16th of February, died from the effects of concussion of the brain received by falling from an eight-foot step ladder, landing on his head. The fall was so severe that he became unconscious. He was picked up by several of the boys and carried to a nearby engine house and later taken to St. Joseph's hospital.

Hope was entertained for his recovery but six days later the sad news came, the injuries resulted in his death. Bro. Gallagher was everything that goes to make up a good, moral character, loved and respected by all who knew him. The sudden removal of such a brother from our midst leaves a vacancy and shadow that will be deeply felt by our Brotherhood and acquaintances, and whose memory will not be soon forgotten.

We are adding new lights at every meeting and impressing on all linemen the importance of our Brotherhood. We have our hands full of business for next meeting, as we expect to initiate eight new members. I would like to say right here that linemen without a good working card, or who have no desire to become a member of our Brotherhood, had better stay clear of St. Paul, for we have no use for such men. Work on the electric line has been on the push all winter. Not a lineman idle. The Northwestern Telephone Co. has recently put in Minneapolis the most modern of all telephone plants and there is now being installed in St. Paul what is promised to be an absolutely modern plant. The opposition telephone com-

pany, known as the Mississippi Valley, is not doing very much this winter, but I understand they are to resume work in a short time. They have most all of their conduit laid in St. Paul, and about as far advanced in Minneapolis. They have also a 50-foot pole line erected between here and Minneapolis. Out-door work has been very severe on the boys this winter, owing to the extremely cold weather we have experienced. The first half of February will go down in history as being the coldest this country has seen for years. Several of the boys froze their feet, fingers, and noses, but now as the weather has moderated, they all report O. K. again.

Hoping the editor may find space for 23's letter, I am

Fraternally yours,
J. T. CALLAHAN,
Press Secretary.

Local Union No. 32.

Lima, O., Feb. 28, 1899.

Editor Electrical Worker:

As last month's Worker had no notice from No. 32 I thought a few lines would be acceptable. We are having rather a hard time to get all the boys in with us, but if pluck and perseverance will do it we will get them after a while.

All the brothers are working. Bros. A. and H. Worline, R. McGinnis and C. Sowers are with the C. U., who are doing quite a bit of cable work here just now. Bros. Howensine and Reynolds are with the Western Tel. and Cons't Co. We did not get our January Worker. Why not? Bro. Krouse, who had his foot broken by a fall from a 35, is doing well, and expects to be to work in a short time. He is visiting in Ft. Wayne, Ind.

Work here does not look very promising, as there is very little building to be done. The Lima Tel. Co. will do a little as soon as the weather settles, but that is all we can hear of just now, so we do not expect to be overrun, but hope to make a good living.

We extend a cordial welcome to all brothers traveling in our neighborhood, and hope they will call and, if possible, meet with us on either the 2nd or 4th Monday of the month in the Gazette building.

Yours truly, C. G. S.

Local Union No. 35.

Boston, Mass., March 9th, 1899.

Editor Electrical Worker:

Dear Sir—In the January Worker, if my memory serves me right, Pittsburg offered some suggestions as to what lines Press Secretaries should follow in sending in letters. I imagine if I didn't have that taste cultivated of which he speaks Local 35 would not be heard of this month, but, I must not let a little matter like being away from the city, and located for the

past three weeks in the country, cause me that annoyance that it might a less cultivated scribe, in being so far removed from the field of activity. Time, just at present, is no object, as it hangs as wearily and lazily over my head as the smoke does over Pittsburg on a balmy day in summer.

The weather here this morning is superb. I hope it will continue so and tend to inspire the different concerns who anticipate doing construction work with a feeling to get a move on. I understand there will be a new concern in the field as soon as the weather opens up, the Massachusetts Telephone Company. Their work is not to be confined to Massachusetts alone, but will take in Southern New England, with trunk line to New York. The American Telephone Co., I am also informed, will construct another trunk line to New York and is only holding back on account of the weather. In the event of this work being done, the outlook is favorable, and some reason to encourage. Many of the outside men which have been idle most of the winter, and whose tools have been laid away in their Uncle's back room, will relieve him of the responsibility of preserving them much longer, and their places will be taken up with ulsters and other winter paraphernalia which people find encumbrances in the summer time.

I went into the city last night, as it was regular meeting night of Local 35. I dropped into the hall for a few minutes to learn what had developed since I left. Bro. Harding, our business agent, reports being in communication with some of the most rational merchants in town regarding the employment of union men on any and all lines of wiring they might have to do, now or in the future. He reports a very favorable consideration in most cases. At a meeting three weeks ago, the local thought it important to create an executive board, and seven members were appointed. I understand it to be the duty of this board to act as an advisory board, to take up matters of a critical nature, such as controlling grievances, etc., reporting to the body their best judgment in such matters; relying then upon the action of all for due consideration. When I left the meeting, the body was acting on amendments to a new contract. The old one did not seem to fill all requirements. From the three or four articles amended while I remained, they seemed to be progressing nicely. If they continued with the same good results throughout, I am satisfied the contract is now as it should be. Some time ago, think it was local at Cleveland wanted copy of our contract. At that time the new contract was under consideration. I hope to be able to get the new contract for publication next month.

Bro. E. N. Colvin, employed by city fire alarm, fell from pole yesterday and sustained severe injuries. He was taken to

the City Hospital. Bro. A. Sprague is confined by paralytic shock, his whole left side being affected.

Before closing, I wish to say that I am pleased to take up the daily papers here each day and find the good news coming in from all quarters that the poor man's wages are being increased. We look with particular pride upon this great American nation, and at this time, when it seems to be developing, whether due to the present administration or not, we are content. We only hope the prosperity will continue to extend itself, and the whole country be submerged by its influence and lifted from the mire of depression so long incumbent upon it.

Our little difficulty with Spain about settled, Dewey and Otis squaring matters in the Philippines, congress adjourned, the president going on a vacation, all seem to point to a bright and prosperous future.

F. J. SHEEHAN.

Local Union No. 36.

Sacramento, Cal., March 3, 1899.

Editor Electrical Worker:

For some unknown reason the Workers received in Sacramento were few and far between this month. I am satisfied the fault is not with the editor, but where is it? I may be wrong to begin with a kick, but can't help it, it's my nature.

When I was elected to the office of Press Secretary I promised faithfully to have No. 36 represented every month during my term. A few lines appeared in the January number. The boys rejoiced, saying, "At last we have a Press Secretary who will write to the Worker, be it ever so little." The February number found me minus, all on account of the little article criticising some of the scribes on account of their short letters. Sorry to say, but I happen to come under the heading of short-winded scribes, so I thought 'tis better not to write, as I am no journalist nor able to discuss the labor questions of the day intelligently. The boys still insist on a few lines, so here I am again. As it takes practice to make perfect, the brothers will kindly excuse me if I begin right now. Maybe by the end of the year this local's letters will be a shining star in the Worker (providing they elect another Press Secretary). Until this year unionism has been pretty quiet in Sacramento. Thanks to the efforts of the Council of Federated Trades we are coming to the front.

The laundry workers organized and are now over 100 members strong, with new ones every meeting.

The electrical workers are not asleep either. A business committee was appointed and, from last reports, they are on the move.

Bro. John Klein paid us a short visit the other day. Bro. Ebersole has been on the sick list for two weeks.

The Sunset Tel. Co. is laying some additional underground cable.

We adopted a new set of by-laws and, with Bro. Durkee in the chair, we will see them enforced.

Work is fair, considering the time of year.

Wishing success to all I remain.

Fraternally yours,
C. V. SCHNEIDER,
Press Secretary.

Local Union No. 37.

Hartford, March 9th, 1899.

Editor Electrical Worker:

As there is a lack of interesting news to write about this month, I shall endeavor to give the readers of the Worker a brief description of the plant of the Hartford Electric Light Co., where a large number of the members of 37 are employed. This plant consists of three stations. Number one, or what is known as the River Station, is situated on the Farmington river about eleven miles from the city, on one of the best water power rivers in this country. It is a brick and iron structure of two stories. On the first floor are the turbines which supply the power to two 600 K. W. 500 volts Westinghouse generators. The current is then jumped up by the use of step up transformers to ten thousand volts and transmitted to Pearl st. station or station two, where it is reduced to 2,400 volts single phase, and is distributed to the outlying districts for light and power. The reason that 1,200 volts is used as well as 2,400 was to render possible the continued use of some older type of transformers. It is also used to operate a synchronous motor of 600 K. W. capacity placed on one end of the shafting at Pearl street station, in the other end are one nine hundred horse corliss compound engine and one six hundred horse of the same type, and it is so arranged that the motor or either of the engines can be disconnected from the shaft at any time. This shaft operates the series arc dynamos and a 600 K. W. generator.

The motor can be used as a generator when operated by the engines to supply current to the alternating system. It is so connected with the bus bars at the switchboard that when the generators at the power plant fail to supply the demand it can be used to help out and also answers as a space generator in case of trouble or when there is a lack of water power. This motor is made to generate at 2,400 volts so no transformers are needed when it is used as a generator.

The ten thousand volt line is broken at the power house and at the Pearl street end by six specially constructed spring jack plug switches, so that it is possible at all times to kill the line very quickly in case of trouble. There is also a set of lightning asserters on both ends. At the power station they are placed in a

small building apart from the station proper, and on the other end they are placed in what is known as the terminal house, situated about six blocks from the station. The line comes to these overhead and from there goes underground to the station. Pearl street station is so situated that it is well adapted as a central station to supply current at high voltage to residence and manufacturing parts of the city, and to supply the series arc system. All the direct current is supplied from State street, or station number three, of which I will speak later. The company is at present installing a number of series arc transformers made by the General Electric Co., which are to take the place of the arc machines in use at present. These transformers are similar in construction to any ordinary station transformer, except that the coils are balanced so as to bring the secondary coils in closer relation to the primary or draw them away, as the number of lamps in the circuit may require to give them a uniform current throughout. The lamps are of the enclosed type and require about six and a quarter amperes at seventy volts. They have about six of these transformers in use at present of a capacity of between five and six hundred lights. They are situated in pairs in buildings built especially for them in different parts of the city.

(To be continued.)

Local Union No. 38.

Cleveland, O., March 9, '99.

My Dear Nephew:

We are living in an age of competition; or, to be more explicit, we have been living in an age of competition, but are living just now in the age where competition ends. It is an old saying, and as false as it is old, that competition is the life of trade. A bigger mistake was never made than to suppose that competition is necessary for the life of trade. Else why are all the trusts forming to get rid of competition. It is competition that kills trade and trades of all kinds; it is competition that compels the small business concern to surrender to the larger; it is competition that drives the man with a small capital to the wall, while the larger concerns prosper and grow rich; it is competition that makes the workingman rob, steal, beat, and often murder his fellow man that he may take his place in shop or factory, and thereby earn bread for wife and little ones; it is competition that drives the millions of tramps from one side of the country to the other. The tramp, tramp, of your fellow workman in search of an opportunity to earn an honest living is chargeable to competition, but, thank God, the end is in sight. And who is it, I ask you, that is bringing it to an end? Why, my dear sir, it's the very same trusts the people are howling about. The trust of to-

day is a blessing in disguise; it's the salvation and the only salvation of the working people. Do not try to legislate against them now. Let them go; they are building better than they know. A trust is a part of the huge industrial machine, and to destroy any part of it would be committing a crime that ought to be punished by imprisonment in a lunatic asylum.

Now, do not misunderstand me. I do not wish to be understood to mean that trusts are a good thing, owned and managed by individuals, for they are not; but owned and managed by and for the people they are a good thing, and the day is not far distant when the people will own and operate all of them.

Gov. Pingree says it is no extravagance or despair to anticipate the time when the passenger and freight rates on every train traversing the country, when the charge for telegraph and telephone in every State, and the ownership and control of every street-car line and suburban railroads shall be centered in one great office in the city of New York, in the hands of one body of managers, or possibly in the hands of one man, who may have the genius and power to control his fellows. That is the time we are waiting for, Governor, and when that time comes the people will take possession of that big office, and from that time on prosperity will be a reality and not a dream.

Sixty-eight governments own their telegraph lines; fifty-four governments own their railroads in whole or in part, while only nineteen, the U. S. among them, do not. In Australia one can ride 1,000 miles (first-class) across the country for \$5.50, or six miles for two cents, and railroad men are paid more for eight hours labor than in the U. S. for ten hours. Does this impoverish the country? In Victoria, where these rates prevail, the net income for 1894 was sufficient to pay the federal taxes. In Hungary, where the roads are State-owned, one can ride six miles for one cent, and since the Government bought the roads wages have doubled. In Belgium fares and freight rates have been cut down one-half, and wages doubled. But for all that the roads pay a yearly revenue to the Government of \$4,000,000. In Germany the Government-owned roads will carry a person four miles for a cent, while wages of the employees are 120 per cent. higher than when the corporations owned them.

Has such a system proved ruinous? During the last ten years the net profits have increased 41 per cent. In 1894 the roads paid the German Government a net profit of \$25,000,000.

It is estimated that the Government ownership of railroads would save the people of the U. S. annually \$1,000,000 in money and give better wages to its employees, 2,000,000 of whom would doubt-

less be needed, instead of 700,000, as at present.

This shows (1) that the Government owning public utilities makes millions through their operations, which save the people just so much in taxes; (2) that the people get lower railroad passenger fares and freight rates, which saves them a vast amount of money; (3) that railroad employees get much larger wages, which adds to their purchasing "power" and general prosperity; (4) that increased traffic resulting from lower fares and higher wages makes necessary the tripling of the number of employees, which in the U. S. would do much toward solving the out-of-work problem.

In Glasgow, Scotland, the street-car lines owned by the city, I am told, relieved the residents entirely of municipal taxes. Six miles for a cent! What a lot of visiting there would be even if the rates were six times as much. That would certainly be better than to pay five cents a mile, that the Plant system exacts, and is losing money at that.

Uncle Sam can carry a letter 3,000 miles for two cents and make enough off of the job to carry a pound of newspapers anywhere in the country for a cent. Now, possibly if he had all the railroads he could carry the passengers for a cent a mile and make enough in the traffic to run the government without a tariff or revenue tax. I could then go down to see Bro. Sherman while he was visiting in Chicago, and my little nephew from No. 18 could come down to Cleveland and see his uncle and answer some of his questions, and everyone could go to Florida in the winter and to Alaska in the summer.

But laying all joking aside, this is a summation devoutly to be wished for, and it would be a relief to those poor fellows who have to rack their brains on from ten to fifty thousand a year salaries to know how they shall make the railway pay with a transportation three to ten cents per mile and freights that frequently exceed the value of the goods carried.

I tell you, my boy, we are slaves; base slaves to base-born tyrants. The sun rises in its course and sets on a race of slaves. With Mr. Herbert N. Casson I agree that no slaves ever poured out so much sweat at their masters' feet as we have. No slaves ever voluntarily wrecked their constitutions for their masters' sake as much as we. No slaves ever got so small a proportion of what they created. No slaves ever made their masters rich so fast and created over 4,000 millionaires in 30 years. No slaves ever began in freedom and worked themselves into bondage voting and shouting for the industrial system that was plundering them of their liberties. No slaves ever before held out their wrists for the handcuffs and danced with such thoughtless glee to the whipping-post, or

sprung with such willingness on the auction-block. No slaves were ever captured with such ease or duped with such empty phrases, or managed with so little trouble to their masters. No slaves ever made the treadmill turn so fast, or were so deceived into believing that the chance to tramp on the treadmill was a blessing and privilege.

But what are you going to do about it? I'll tell you what to do about it. Go to the polls and see to it that no man is elected to any office that has not the interest of the workingmen at heart. You have never done it yet, but you can if you want to. There are millions of you, and you can have anything you want; but if you don't know enough to ask for it, how can you expect it.

If you are not dumb driven cattle you will exert your manhood and cease to perpetuate a system of government that pretends to be founded upon liberty and justice, but whose prevailing system is: The race to the swift, the battle to the strong, the weak to the wall, the vanquished to the sword—a perfect realization of the survival of the fittest.

Do you wish to leave as an inheritance to your children and your children's children a system of government that will make of them thieves, robbers, scabs and murderers? If not, come out into the sunshine and see yourselves; feel around and see if you are asleep or awake. Rise up, William Riley, and come along with me; for the time will surely come when the American workmen will be compelled to assert themselves and break these chains of tyranny, or this Government must go down forever.

It is of little use for the United Brotherhood of Electrical Workers, or any other workers, to try to improve matters until the machinery of government is taken from the hands of those who are directly opposed to us. So long as capital rules over courts and legislatures, just so long must labor take a back seat, and keep it. So long as labor will be fooled by such empty phrases as, "The interest of capital and labor are the same," just so long will the workingman work long hours for short pay, or what is little worse, no work at all, and therefore no pay.

Listen to this: The last message sent to Congress by the President contained 25,000 words, and of that number just 38 words were devoted to the petty reforms prayed for by organized labor. Talk about the Eight-Hour Bill becoming a law! why, it had about as much chance of passing the Senate as did Robinson Crusoe of becoming a father on the Island of Despair. True, it passed the House; but the House knew, and the Senate knew, and the Senate knew that the House knew, and the House knew that the Senate knew, that the bill would die in the House of Lords—the American Senate.

My Working Brethren, you are sixty million strong in this land of seventy millions, and you have no more influence than the handful of red Indians on the plains of your native land. You never nominate a President, or Governor, or Mayor, or Coroner, or Dog-Catcher. What's the matter with you? When are you going to begin? You vote for men you never heard of; for men who never heard of you, except as ballots, and who care nothing for you. Next fall, and the next, and the next, will you continue to do the same? You are owned to-day by the corporations, which make merchandise of you. Are you going to stand this always, and utter no protest? A dog will bite when he is kicked; or at least howl. Why don't you howl, if you can't bite?

But, Mr. Editor, I will let up. I might go on until I filled the Worker chuck full and running over; until you would be compelled to get out an extra edition for my special benefit; but I recognize the fact that I am not the whole thing, so will change the subject.

No. 38 is prospering as usual. Last Wednesday evening we gave our mid-winter smoker—cigars, pipes and tobacco, speaking, music, singing and boxing. A large crowd attended and a "heap good time" was had all around. Quite a number of prominent people who had been invited were unable to attend, but most of them sent letters of regret. The following is a sample of some of them:

Senate Chamber, Washington, D. C.
To the Sec'y Local No. 38, Cleveland, O.

Dear Sir—I am very sorry I cannot be with you on Wednesday evening and enjoy a smoke with you, but it seems impossible. I brought the matter up in the Senate this p. m., and tried to get an adjournment for a couple of days, so I could come up and bring a couple of my chums along with me, but Tom Platt and Bill Mason made such a kick that I was compelled to give it up. I am doing my best to get the Eight-Hour Bill passed this term. I almost got it passed the other day, while most of the Senators were asleep, but Mat Quay, who was helping me to pass it, stumbled against old man what's-his-name, from Vermont, and he let a roar out of himself that awoke the whole Capitol; so I got left that time, but hope for better luck next time. With much love to all of you, I am,

Yours truly,

M. A. HANNA.

P. S.—Tell Uncle Tom Wheeler that I have recommended him, and Mac has agreed to appoint him Inspector of Sour-Krout at Manila.

M. A. H.

Mayor's Office, Cleveland, O.
Sec'y Local No. 38:

Dear Brother—Please say to the boys that I am with them heart and soul. The only reason I can't be with you to-night is

this: I am so busy counting the majority I am going to have over J. Farley on next election day. If you will give another smoker after election I will surely be with you, and if I am elected I will put on the gloves with any other statesman in the city. I will also state that I shall probably have a few thousand election cigars that I can dispose of in job lots very cheap. You might work them off at the smoker.

Yours as ever,

ROBT. MCKISSEN, Mayor.

Mayor's Office, Chicago, Ill.
Mr. Sec'y of No. 38:

Dear Sir and Bro.—I regret exceedingly that I shall be unable to be with you Wednesday evening, but business forbids that I should leave the city at this time. I am expecting McKinley's Beef Commission up here in a day or two to inspect our (Embalmed) beef factories, and I must be at home when they come. We have been getting ready for them for some time. Most of the packers have put on an extra force of barbers, and by working overtime have been able to get the whiskers shaved off of most of the beef. This improves its looks wonderfully, and by injecting a little skunk perfume into odd places about the packing house, one does not notice the smell of the beef quite so much. I think the Commission will pronounce the beef O. K.

Another thing that keeps me at home is the fact that owing to the over-production of women folks in this city quite a number of our most enterprising citizens have formed the habit of making the surplus into sausage. We have now the third case on hand, and it not only makes the retail butchers mad because they can't compete with the sausage makers, but it encourages a business which, if not stopped, will soon develop into a trust, and we can't afford any more trusts.

Hoping you will enjoy yourselves, I am as ever, Your obedient servant,

C. HARRISON, Mayor.

Quite a number of other people wrote their regrets, but time and space forbid their publication.

And now, my dear nephew, comes the saddest part of my duty. Oh, how can I tell it. My feelings overcome me so much that I am obliged to go out and see a man before I can proceed. Well, if I must I must, but my heart swells up in my bosom until it feels as big as an elephant in a hoop-skirt, and the wet, briny tears course down my weather-beaten cheeks onto the table, thence off onto the floor, out through the front door, across the porch and off onto the sidewalk. My dear boy, forgive these tears, for I am only a weak mortal at best. Oh my, oh my, oh my! No So is no more. She has gone up the spout; climbed the golden stair; walked the plank; give up the ghost; passed beyond the great

divide; kayflumixed, croaked, and gone to the happy hunting ground.

I cannot at this time give you the full particulars of our darling's demise, for my heart is too full for utterance. I can only say No. So is dead—deader than * * * dead, but not forgot. Perhaps in the near future, when the sunshine of gladness has chased the dark clouds of sorrow from my heart, from this mold of clay, I may be able to tell the story, but not this evening.

And now, may that peace that passeth your and my understanding be yours forever. Amen.

Yours, UNCLE TOM.

Local Union No. 40.

St. Joseph, Mo., March 4, 1899.

Editor Electrical Worker:

We are much gratified to report that Local No. 40 is beginning to get into action. Some of the members who have been absent for a long time found that things were not going on as they wished, and, in consequence thereof, our local had a good attendance on March 2nd, some of the real union spirit coming to the top. Bro. Wise made a very good point when he said "Union men should act for the union and for union men and against scabs and non-union men, and show the scabs and pretenders the cold shoulder." There was quite an interchange of ideas which we were pleased to hear. We hope that Local No. 40 will push the good work along, now that she has made a start. The motto should be, "We can if we will." Bro. McCarthy gave a preliminary reading of a set of by-laws which he has compiled. Much credit is due Bro. McCarthy, for it takes some time, patience and thought to get up such a set of rules as we heard him read at our last meeting.

The prospects are that the electrical workers of St. Joseph will have plenty of work this season. We believe they are all employed now. In our last letter we made mention that the brothers who stay away from the meetings of the local and then make objections to the way business is transacted are like the "I-told-you-so" man, and very much expose their ignorance and laxity of duty. Well, on March 2nd we had them. We should have roasted them hard, but we let them down easy. Some evening we will take occasion to twist up these kickers who come in after the game is over to make a howl just as tight as the words of the English language will permit, and drop them so hard that the shock will crack their mental castle. First of all, brothers, the members, all of them, must attend and support the union, then the union can in turn support its members. We cannot expect the union to do anything for us if we do nothing for the union. The union, like the bridge, to stand the strain of its capacity, requires

that every bolt and every bar shall do its duty.

Respectfully,
No. 40's PRESS SEC.

Local Union No. 41.

Buffalo, March 8th, 1899.
Editor Electrical Worker:

I am afraid my letter this month will not be very interesting and rather short. I suppose the majority of the boys know I am located in my old town, temporarily, putting in a seven hundred light plant complete, including all bell and telephone work. I find it rather hard to find Buffalo news to write, having to pick it up in Rochester, but I feel in duty bound to write something. No matter where I may be and I am Press Secretary, you will hear from me through the Worker.

I am sorry to say the subscription for Bro. Wright has not come up to my expectation, but we have realized somewhere in the neighborhood of forty dollars, which I will have the G. S. send to Bro. Wright at once; I can see no use in holding off any longer for I think those who care to subscribe have done so.

I want to thank Bro. Hussy for the interest he has taken in this matter, and I am sure he will get his reward for the good work he has done.

News comes to me that Bro. Al Sterns says that business is looking up in Buffalo (now Bro. Sterns don't you mean that you are looking up business) never mind which way it is; our turn will come next.

Another bit of good news has reached me, and that is that Bro. Taylor has been elevated to the Presidency of the Building Trades Council. Good boy, Charlie, never stop until you reach the top rung, but when you get there be sure its good and solid so you won't have to step down any.

Our Recording Secretary, Bro. Bass, is on the sick list. Not seriously, I hope.

I wonder where Bro. Rosenstengel is. I don't hear a word from him.

Bros. Fix, Beckley and Albright are anxious to get back home. I don't blame them. You know they are very much attached to their homes, and being away from home they seem rather down cast, as there is no place to go in Rochester. Well, I guess we will all get back in a week or ten days and I hope I will be able to write something more interesting to all next month.

Yours,
WM. A. BRESEE,
Press Secretary.

Local Union No. 42.

Utica, March 8, 1899.
Editor Electrical Worker:

The Press Secretary of Local Union 42 is not dead, as a warm member would seem to infer, but is very much alive. However, my multifarious duties keep me so busy that I have not had time to drop

the Worker a few lines since my election to the office. I will endeavor to present No. 42 to your many readers if for only once. The electrical workers of this local union should be more ably represented than by me, who has done nothing but pound cedar and jerk wires all his life. "Our warm member," who so ably represented No. 42 in your last issue, should continue with the good work already started. I do not doubt for an instant that there is concealed behind his pen a life most sadly neglected, and his manly form should grace the sanctum of one of our dailies instead. His journalistic powers, with but slight effort, could put him upon better footing, and allow him to wear his hair long. There is an old saying that men of knowledge wear long hair, and why not apply it in this case? Our city, in an electrical way, is sadly neglected. We have a city sub-way built several years ago at the cost of \$10,000, but never a wire went in it. If the city officials would wake up and compel the companies to put the wires under ground in the principal streets, it would furnish work to many needy electrical workers. The electrical workers should themselves agitate this question, and on election day vote for people who would vote for measures that would give them work. The Western Union and Telephone Company are not doing much of anything but routine repair work. The same is true of the Light company. The Belt Line Railroad have some extension in view, which will depend largely on their ability to get franchises.

Bro. Mills is able to be about, and Bro. Van Der Bogart is correspondingly happy. The dance committee is still dead.

Hoping this will meet the approval of a Warm Member, I remain,

Yours very truly,

T. J. MURPHY,
Press Sec'y.

Local Union No. 44.

Rochester, March 12th, 1899.
Editor Electric Worker:

It is with great pleasure I again write for our local. Will state we are still doing business at the old stand and out of town members of the Brotherhood are always welcome providing they are strictly up to date with their cards. We have had a great many on the sick list this winter and the drag on our treasury has been large. It has gone for a good purpose and the boys are satisfied. This is one of the many object lessons we are taught, that it pays to have a few dollars in the treasury for a rainy day. Old 44 has paid all claims at one hundred cents on the dollar and has a few shuckles left and has the right kind of members to help regain what has been lost.

We have great expectations for this

spring in regard to work. A new telephone company and forty miles of electric road ought to hold us for a while. The prospects are good in the building line, in fact all trades are looking forward to a season of general prosperity and, with the union labor clause inserted in all contracts, organized labor will boom and those poor deluded fellows who are on the outside must climb in the band wagon or get lost in the shuffle. Every opportunity will be given and we won't be selfish but want all hands to gain in our prosperity.

Fraternally,
H. N. S.

Local Union No. 52.

Newark, N. J., March 2, 1899.
Editor Electrical Worker:

Having been elected Press Secretary of Local No. 52 I will try and perform my duty as such and keep brother members posted in regard to workings of the local.

We had an installation of officers on Thursday evening, Feb. 23d. The following officers being installed:

President—Joel A. Thomas.
Vice-president—Francis J. McNulty.
Recording Secretary—William S. Harrington.
Financial Secretary—Edward Blakelock.
Press Secretary—Wm. J. Larkins.
Treasurer—Wm. Bamford.
Inspectors—Martin Kline, Wm. Marshall.
Trustees—Ed. Sisson, Wm. Goff, Ernest Bischoff.

Foreman—Thomas Cloonan.
The installing officers were as follows: Wm. Vaughn, President No. 12, New York; Julius Scheller, Vice-president, No. 12, New York; Secretary, Harry Knight, No. 12, New York; William F. Adams, James Strauss, Geo. Davis, Robert Speers.

After the meeting there was an entertainment given by the members of the local, refreshments being served during same.

The program was as follows:
Address
Mr. Gottlob of the Essex Trades Council
Vocal selections by "Newark's" favorite quartette
Bros. Robert Speers, Frank McNulty, James Kelly, Wm. Marshall.
Song and dance . . . Bro. Matthew Halligan
Magician Bro. Kallenberg
Vocal selection Bro. E. J. Meyers
Electionist Bro. Oscar Flammer
The late J. W. Kelly's only rival
J. J. Matthews
Club swinging Bro. Frank Adams
Vocal selections Bro. Coulin
Contortionist Bro. Michael Layton
Descriptive singing assisted by Bro. Kallenberg with various electrical effects
Bro. Nulty
Last but not least . . . Bro. Wm. Vaughn

Address: Unionism and good derived by such.

After which we all joined in singing our favorite ballad, "Home Sweet Home."

We have at present 74 members, and applications for about six more. In local No. 52 Newark has found a long felt want, and with a little hustling on the part of the members we hope to make Newark and vicinity unionized in all branches of the different trades.

Respectfully,
W. J. LARKINS,
Press Secretary.

Local Union No. 56.

Erie, Pa., March 5th, 1899.

Editor Electrical Worker:

I sent you a few lines last month from Sharon, Pa., as I was engaged there and at Meadville, Pa., fixing the wires and some cables most of the time last month. I did not expect to see many letters in the Worker, for, as I did not write much, I didn't expect anybody else would have any time to write, but I see I had the wrong idea, as the February Worker was full of good letters.

Now, when I read the Worker I just imagine as I read each brother's letter that it is written direct to me, and I am always glad to get so many answers to my letter and read them all over carefully. Now, I got one letter through the Worker from Uncle Tom. I don't know Uncle Tom personally, but I have seen Uncle Tom's Cabin, and I judge he's a right smart good kind of a brother. But I don't think he ought to blame No. 56 because one of his X helpers took John D. Rockefeller's rabbit. The ex-Bro. Schwimmer never was a very good member, especially after he got charge of a little gang. But he always kept out of jail here and I think that his surrounding influence had something to do with his trouble in the City of Cleveland. Of course Uncle Tom haint to blame if his children make mistakes.

I know three of the Schwimmer boys. Their home is in the District of Indiana some place, and I never knew any of them to swipe any junk until Harry went into Cleveland.

Well, of course you would like to know what is going on around 56. We broke the circuit the other night and put in another light. This makes two new ones in the month of February, Bros. Hardin and Eighmy.

Bro. E. E. Hart has gone to New Castle, Pa., to take out a gang for the Union Tel. & Tel. Co. there. Bro. Jacobs has been cut in the country with a gang for the past few weeks. He is stringing south of Girard, Pa. Work has been very good here this winter for the brothers of No. 56, and a good card generally finds a job or gets put on track of one when it drops into Erie. Both of the 'phone companies keep

small forces busy unwiring drops for new 'phones.

Well Bro. Ed., I have a piece of bother east of Erie, so I will cease.

Fraternally yours,
L. E. C., R. S.

Local Union No. 66.

Houston, March 6, 1899.

Editor Electrical Worker:

I will try and send you a few items for this month's issue. Work is plenty here at present, all members working, and some that are not members, or rather they are has-beens. What do you think, brothers of a member who owes a fat job to his union and has not employed a union man since he got it? The fire alarm system is being entirely overhauled, and a number of changes being made.

The Telephone Company is busy on the new Main street work, and the Light Company expect to get at it in a few days, or as soon as their poles arrive. We thought we would be able to better the condition of outside men this spring, but we are not prepared to say what can be done yet, as we are not getting the co-operation we expected. It looks as if the bread we cast upon the waters instead of returning to us has swelled up and set up a sail of its own, and is going by without seeing our distress signal.

R. R. TRIPP,
Press Sec'y.

Local Union No. 67.

Quincy, Ill., Feb. 25, 1899.

Editor Electrical Worker:

I have not much to say this month, but will let the rest of the unions know that we still have a circuit formed. Work is very slow here at present, but we are looking for better times in the spring when the building commences and the company begins changing its lines. There is not much chance for traveling brothers here as a number of our men are working very little.

Yours respectfully,
J. M. R.,
Rec. and Press Sec.

Local Union No. 69.

Dallas, Tex., March 3, 1899.

Editor Electrical Worker:

I will try again to write a few lines to our valuable paper. We are getting along all O. K. at present. All members are working and we have added four new members in the last month. We have been trying to get the inside men to come in with us and I think we have about got them in the notion of joining us in the good work. Now, if we could get the Ben. Johnston telephone men we would be in line with other locals of our Brotherhood. We have got a couple of brothers from No. 4 working with us at present and we had a visitor from No. 40 of St. Joseph, Mo., but

he was working for the W. U. T. Co. As I have not an overload of news, I will ring off for this time. Best wishes to all members. I remain, as ever,

C. T. WHEELER,
Press Secretary.

Local Union No. 72.

Waco, Tex., March 7, 1899.

Editor Electrical Worker:

I will try and write a few lines to let the brothers know how things are here. The prospects for work are very good. The S. W. T. & T. Co. is going to do a great amount of work, and the long talked-of independent company has its poles here and are shaving and framing them. On framing is where we have got a good big kick to make. Instead of putting on linemen to frame, they got some \$1.50 saw and hatchet carpenters to do that. They said they wanted to economize all they could now. If that is what they call economy, I would advise all the boys to steer clear of Waco, for if they persist in that kind of business we will have to call their hand. We gave them a round, and they put on J. W. Kane, an old No. 3 man. At the present time about half a dozen linemen are hanging around, but I don't think you can find a card in the lot. Boys, you had better take my advice and not come to Texas without a paid-up card.

We have Nick Buhler and H. D. Parsons with us now. If they keep dropping in we will have a pretty good local here some day.

As I have been on a bike all day I think I will have to close for this time. Any one wanting to know anything about work any time, I will be glad to keep them posted.

E. P. McBROOM.

ELECTRICAL WORKERS

Send in Your Orders for



EMBLEMATIC BUTTONS. . . .

A Large Supply on hand.

Solid Gold, \$x each. Roiled Gold, 50c. each.

H. W. SHERMAN, 731 Powers Block,
Rochester, N. Y.

STEVENS' MECHANICAL CATECHISM.



Indispensable to all Steam Engineers, Machinists, Ice Machine Men, Electricians, Firemen and Mechanics generally. New and original. All modern machinery fully described and explained. Technical points made clear. Over 150 carefully designed sectional illustrations, and over 200 pages of text. Descriptions alternate with exhaustive sets of Questions and Answers, affording an effective preparation for Civil Service Examinations. Subjects treated: The Boiler and Engine, Combustion, Safety Valve, Injector, Pumps, Slide Valve (automatic and Curlliss), Lap and Lead, Link Motion, Lubricator, Indicator, Horse Power, Refrigeration, Machine Shop Practice, Electricity, Dynamos, Motors, Trolley (underground and third-rail systems). Standard numbers fully explained, also the elements of algebra, hundreds of rules and examples in the simplest English. Silk Cloth, red edges, gold stamped, \$1.00. **ACENTS: THIS IS A MONEY MAKER.** Sample copy and terms mailed on application. LATON & T. E. 203 W. Main St., CHICAGO

LATE LOCALS.**Local Union No. 1.**

St. Louis, Mo., Mar. 10, 1899.

Editor Electrical Worker:

"John J. Smith, an expert electrician out of work, has probably ended his troubles in the river. For three months he fought starvation with waning strength. He would have given up long ago but he loved his wife and little boy and struggled on. Day after day he went away in the morning with just a spark of hope in his heart. Night after night he came home with his heart like lead. He could find no work." We clip the above from a news item in an evening paper. John J. Smith was not a union man. Further comments are unnecessary.

Several months ago the electrical workers started a movement to have a union labor clause in all city contracts. As a result of this agitation the following ordinance, endorsed by the Building Trades Council and Central Trades and Labor Union, was passed by the House of Delegates by a unanimous vote and is now before the City Council:

AN ORDINANCE

To Define the Class of Labor to be Employed on Public Work in the City of St. Louis.

Be it ordained by the Municipal Assembly of the City of St. Louis as follows:

Section 1. Hereafter, no contract, which requires the employment of skilled labor, on public work in any of the departments of the city of St. Louis, shall be made or entered into by said city, acting through its regularly authorized representatives, with any person, firm or corporation, unless it is expressly agreed and stipulated in such contract that only union labor shall be employed on such work. By union labor is meant: members in good standing in a regular Trades or Labor Union of the city of St. Louis, of the trade, calling or vocation of those to be employed under the contract.

Section 2. Hereafter, no money shall be paid out of the city treasury, upon any contract for public work in any of the departments of the city of St. Louis, unless the provisions of this ordinance have been fully complied with.

Section 3. Any officer or other person, acting for or on behalf of the city of St. Louis in the making of any contract for public work, who shall violate any of the provisions of this ordinance shall, upon conviction, be punished by a fine of not less than two hundred (\$200) dollars.

The city council is composed of a president and twelve members, elected at large, while the House of Delegates is composed of twenty-eight members, one from each ward. Together they constitute the Municipal Assembly. Organized labor of the city is bringing strong pressure to bear on members of the council to vote in favor

ISN'T IT FOLLY
to buy that which may be adulterated
WHEN YOU CAN GET
O. * F. * C.
WHISKEY
for the same price, and with it the
United States Government Stamp of Purity.

Local Union No. 10.

Indianapolis, Ind., Mar. 6th, 1899.

Editor Electrical Worker:

The short month of the year is past and windy March is here and calls for letters from the P. S.'s all over the country, so that this issue of the Worker may be an interesting one, and I do hope that the record of last month may be broken and left far behind. Out of sixty-one locals that have charters in the N. B. E. W. only thirty-one letters can be counted in the February Worker. If any one will describe the nature of the trouble of the pencil hand that should write we will be glad to prescribe a cure for it and one that has been tested and tried. Among others from whom we have not heard are the sisters of No. 80. We miss their letters from the columns of our paper. We would like to hear from them again, for their letters were interesting and greatly appreciated. I want to especially compliment the P. S.'s of Nos. 65 and 38 for their excellent letters, and No. 30 for the information he gives regarding work for the coming season, and, especially to Ann Arkist for the contribution of Hot Stuff from Chicago. I, too, think that the author of the song of the gold bug ought to have signed his name in full. I think that Brother Reeves of No. 65 has voiced my sentiments in his February letter as nearly as I could have told them myself. Brothers, if you want to know my opinion of how members ought to be dealt with that are getting good wages and are constantly in arrears, read what the president of No. 65 says about them. I would like to ask what benefit they are to the local, and what benefit the local derives from carrying them on the books and paying their per capita tax

and allowing them the same privileges as those who pay up every cent due the local. And now in reference to Bro. Reeves' notes of the complaints of some about the P. S. of the locals not writing enough about the issues of the day, which so much concerns the laboring public and the masses of the people. Brothers, I am willing and I think Bro. Reeves and all other P. S.'s are just as willing, to write on these subjects, but I think that after we have written our local letter what little we would say on the political issues would not amount to much, therefore I think that it is the duty of all locals to interest themselves in these most important matters and see to it that the Worker has a correspondent that will give these questions that are of vital importance to the public their especial attention. I think that organized labor everywhere ought to study carefully and well the political issues at all times, and use every means in their power to get the true condition of affairs before the masses, that they may see their real condition, and show them if possible the way out of their present deplorable state. The example is set by Ann Arkist. Why not let us here from more members and let us all take an interest in the issues that concern life and liberty, uphold the right and condemn the wrong in politics. Help your P. S. to voice the sentiments of your local in all matters and see how much better our paper will be.

No. 10 is going on at the same old rate. We have one or more about every night that wants to make the acquaintance of our goat and quite often a stray brother wandering back into the light. Our boys are all at work and as far as we know all are well.

Brothers, when you read the names of the St. Louis scabs and see the names of Geo. McLaughlin and Chas. Johnson, please do not couple them with George and Charlie of No. 10. If you do, you may cause our brothers to have their names changed as they are seriously contemplating that move already after learning of scabs who bear the same name.

Well, I guess it is time to ring off unless I want to work over time.

Fraternally yours,
E. E. B.,
Press Secretary.

MEASURES AND MEN.

A bill to cut the claws of monopoly has been introduced in the Illinois House of Representatives. It provides that "cities may acquire, construct, own and operate all public utilities such as a street car, telephone and telegraph lines, gas plants and electric light plants." The Hon. Carter Harrison approves the bill, and it will probably be put into the next platform of the Chicago Democracy. Statesmen like the Hon. Bath House John and the Hon. Hinky Dink look forward hopefully to the task of operating public utilities.—New York Sun.

MORGAN & WRIGHT TIRE

SEND ONE DOLLAR

CUT THIS AD. OUT AND SEND TO US...

State whether GENTS' or LADIES' bicycle is wanted, gear and color wanted and we will send you this **OUR HIGH-GRADE '99 MODEL** Acme Prince bicycle by express C. O. D., subject to examination. You can examine it at your express office and if found perfectly satisfactory, exactly as represented, the greatest bargain you ever saw and equal to bicycles others sell as high as \$50.00, pay your express agent our special offer price, \$18.75 and express charges, less the \$1.00 sent with order. Express charges, average \$1.00 for 500 miles; greater or lesser distances in proportion.

MORGAN & WRIGHT'S Highest-Grade, one year guaranteed, pneumatic Tire, 22, 24 or 25-inch Diamond 1 1/4-inch seamless steel tubing frame, finest 2-piece Sealy hanger, finest crystal steel adjustable bearings throughout. Wheels, Rowell's best 28-inch. Full ballbearing throughout. Ackers ball retainers throughout. Finest equipment. Index chain. Canton padded Saddle. Best handle bar made, up or down turn. Clark's anti-friction, ball-bearing, ball-retaining pedals, heavy leather tool bag, fine wrench, oiler, pump and repair kit. Wheel is given finest possible finish, enameled black, green or maroon. All bright parts heavily nickel plated on copper. No wheel is more handsome. A BINDING ONE-YEAR GUARANTEE with every bicycle. If you don't find it equal to other \$40.00 wheels, DON'T TAKE IT. \$3.25 Stripped, \$11.75 and \$16.95 Fully Equipped is our price for cheaper (1899) bicycles. No old models, no worthless second-hand wheels. OUR FREE BICYCLE catalogue shows our entire line up to \$23.75. WRITE FOR IT. ORDER OUR \$18.75 BICYCLE AT ONCE, SEARS, ROEBUCK & CO. (INC.) CHICAGO, ILL.

THE JERKERS.

How many have heard of the jerkers? asks an old labor leader. Its a queer name, isn't it, but a fitting one all the same. It is quite common to hear of the workers and the shirkers. Well there is a class of folks in between these. It is the jerkers. While the workers do all the work and the shirkers none at all, the jerkers go at things by fits and starts. They pull forward a little, then begin to back at the first thing that doesn't suit them, pull another little bit forward, then back they go again. What consternation they sometimes create! For, you see, it is never known just what mischief they may do by backing, always at the wrong time.

I once had an experience with a jerker. Let me tell you about it. One fine summer morning I started off to visit a friend who lived some distance in the country. I had been loaned a very nice horse to drive—that is, he was nice so far as looks went, for he was fat and sleek, and he held his head high. But, alas! you can't always depend on looks. I had gone but a short distance when, all at once, the horse stopped. In vain I urged him to go. He would take a few steps forward, then begin to back, take another few steps forward, then back himself again. He would have kept this thing up for hours, perhaps, if I had had the patience to submit to it. But I had not. I turned him around and drove him back home. I had had enough of this jerker, the backing horse, the contrary animal, willful and notional.

When I see people in the union pulling a little way with the others, then all at once stopping and backing, I think of this jerker. It is vain to try to persuade them to go forward. If they don't want to, they won't—or at least not until it suits them; so there's no use wasting speech. The shirkers generally keep out of the way, so

do no harm to others; but the jerkers—first pulling then backing spasmodically—are bound to give consternation to, as well as to make trouble for, the steady pullers.

Get all the workers you can, union men; go gently to the shirkers, and try to persuade them back; but, Oh, beware of the jerkers.

ADJUSTABLE LIGHT.

Magnet at the End Fastens the Incandescent Bulb to Any Piece of Iron.

In many kinds of work in a machine shop it is often difficult to throw the light on the particular part of an object where a workman wishes to do something with special care. There may be scores of electric lamps in the shop, but they are too high up for this purpose. Accordingly a new form of incandescent lamp has been invented, the base of which will stick to any iron or steel object with which it may be brought in contact. Hence the lamp may be temporarily secured in almost any position and place.

The globe and filament are substantially the same as in any ordinary incandescent lamp. The novel feature of the invention is a magnet inclosed in the base or standards in such a manner that its ends, or "poles," project through the case. They look like two flat steel ribs on the flat face of the standard. This magnet is not a permanent one, such as is made of hard steel, but is what experts call an "electromagnet," the bars composing it are of soft iron, and no original magnetism is imparted to them. But they are wound with coils of insulated copper wire, through which the current passes on its way to the filament in the glass globe, and out again. Whenever electricity flows through the coils the soft iron cores are temporarily converted into magnets, and as soon as the current is shut off the soft iron is demagnetized and loses its attractive power. The device is a very simple and ingenious thing.

Two slender and carefully insulated wires, twisted together into a flexible cord, are inserted through a small hole in the case, to supply current from some outside source.—N. Y. Tribune.

VITAL STATISTICS.**Great Increase in New York City's Foreign Ancestry Population.**

The present estimated population of New York, five boroughs, is 3,500,000. On July 1, according to the estimate of the board of health, it was 3,438,899, and the increase since that time has brought it close probably to 3,500,000.

During the last quarter officially reported there were 15,000 deaths and 18,000 births in the greater New York, which is equivalent to an increase in population by immigration and otherwise, and regardless of the fact that while practically all deaths are reported a very considerable number of births are not. The present death rate of the city is 17.7 per thousand inhabitants; the present birth rate is 21.7, showing a steady ratio of increase. The board of health figures show, too, a steady increase in the proportion of births among foreign-born inhabitants, a proportion which, if it reflects the facts, indicates that among the foreign-born residents the population is increasing very much more rapidly than among the native-born population. Of 12,000 births reported by the board of health during the last quarter, for which the record has appeared, 3,000, or only 25 per cent., were children of native parents and 75 per cent. were children either of foreign-born parents or having one foreign-born parent. Taking those having both parents foreign-born, and therefore to all intents and purposes foreigners, though native-born, it appears that during the quarter covered by the board of health report there were 3,280 children of Italian or Russian lineage born in New York to 3,020 of native parentage. The Russians were more numerous than the Italians, there being 1,948 children of Russian ancestry to 1,332 of Italian ancestry. The natives of these two countries have contributed most to the board of health totals, and after them come, though at some distance, not as might popularly be supposed the children of German parentage or of Irish parentage, but those described as "others." These are, for the most part, Hungarian and Roumanian, for it is to be observed that they are most numerous in the wards (the board of health makes its computations by wards) in which Russians are many.

Following the Hungarians and Roumanians come first the Germans, then, but not much after them, the natives of Ireland, the figures being respectfully 1,146 and 1,020. The New York wards in which births among Italians predominate are shown by the figures to be the fourth, fifth, sixth, eighth, fourteenth and fifteenth. The two wards in which the births of Russians and Poles exceed all others are the seventh and tenth, in which they consti-

tute two-thirds of the total number. The two Hungarian wards are the eleventh and thirteenth, and the American wards are the ninth, twelfth, sixteenth and eighteenth. In proportion to the population the number of births of children of Irish parentage is highest in the twenty-first ward, and of German parentage in the twenty-third.

If these figures be thoroughly accurate and if the proportions continue—less than one-quarter of the children born in New York County being of native parents, and three-quarters of foreign or partly foreign lineage—it cannot be long before New York will become indeed a veritable city of foreigners if not, as it has sometimes been called, the foreign city.—New York Sun.

WHAT IS A SCAB?

At a conspiracy trial held in England the prosecuting counsel gave the following definition of a scab:

"A scab is to his trade what a traitor is to his country, and though both may be useful in troublesome times, they are detested when peace returns by all; so when help is needed, a scab is the last to contribute assistance and the first to grasp a benefit he never labored to procure. He cares only for himself; he sees not beyond the extent of a day, and for a monetary approbation he would betray friends, family and country; in short, he is a traitor on a small scale, who first sells the journeymen and is himself afterwards sold in his turn by his employer, until at last he is despised by both and detested by all. He is an enemy to himself to the present age and to posterity."

THE REWARD OF HONESTY.

An English farm laborer recently went to a small store kept by an old woman, and asked for "a pahnd o' bacon."

She produced the bacon and cut a piece off, but could not find the pound weight.

"Oh, never mind t' pahnd weight," said he. "Ma fist just weighs a pahnd, so put thér bacon i't scales."

The woman confidently placed the bacon into one side of the scales, while the man put his fist into the other side, and, of course, took good care to have good weight.

While the woman was wrapping the bacon up the pound weight was found, and, on seeing it, the man said:

"Nah, you see if my fist don't just weigh a pahnd."

The pound weight was accordingly put into one scale and the man's fist into the other, this time only just to balance.

The old woman, on seeing this, said:

"Wha, I never seed aught so near afore! Here's a red herrin' for thee honesty, ma lad!"—Exchange.

The Rochester Electric RAILWAY COMPANY

wishes to call its patrons' attention to the fact that their

Facilities for Transportation

to the

NUMEROUS SUMMER RESORTS

in the vicinity of
Rochester

WERE NEVER BETTER

than they will be this coming season.

A PORTABLE CLIMAX**or
A Long Look for Loring's Loss.**

A Complete Story with an Appendix of Useful information, by

ROBERT G. WRIGHT,
Practical Electrician.

This book sent post paid, on receipt of
Price, 25 Cents.

Address

ELECTRICAL WORKER,
731 Powers Bldg., Rochester, N. Y.

Pays highest commission on clubs of six or more.
Postal brings SAMPLE COPY or estimates on

GENERAL LABOR PRINTING

We want
10,000 new
subscribers
and are there-
fore making a spe-
cial trial rate, for a
limited time, which you
can find out about by writ-
ing us. If interested in
electricity send for free sample
copy of the

WESTERN ELECTRICIAN.

When you see the sample you'll want
it every week. We can fill orders
for any electrical book pub-
lished, on receipt of price.
Send for catalog.

Electrician Pub. Co.,
510 Marquette,
Chicago.

Directory of Unions.

Secretaries will please furnish the necessary information to make this directory complete. Note that the time and place of meeting, the name of the President, the names and addresses of the Recording and Financial Secretaries are required.

No. 1, St. Louis, Mo.—Meets every Monday at 604 Market st.; Pres., C. W. Campbell, 3626 California av.; R. S. Paul Eltinger, 1525 N. 12th st.; F. S. P. C. Fish, 1927 N. 15th st.

No. 2, Milwaukee, Wis.—Meets every Friday at 298 Fourth st.; Pres., Joe Harris; F. S., J. H. White.

No. 3, St. Louis, Mo.—Meets every Thursday at 604 Market st.; Pres., W. M. McCoy, 16 S. 17th st.; R. S. J. O'Brien, 1011 N. Leffingwell av.; F. S., Frank Pierpont, 323 Manchester av.

No. 4, New Orleans, La.—Meets 1st and 3d Tuesdays at Carondelet and Perdido sts.; Pres., J. McGregor, 2111 Rouseau st.; R. S., C. M. Hale, 630 St. Mary st.; F. S., R. B. Joyce, 331 Bassin st.

No. 5, Pittsburgh, Pa.—Meets every Friday night in Schinnerer Bldg., cor. Water and Market sts.; Pres., H. H. Haas, Oak Station P. O., Pittsburgh; R. S., Frank Lunney, 301 Robinson st., Allegheny City; F. S., F. G. Raudolph, 805 Walnut st., Station U., Wilkensburg, Pa.

No. 6, San Francisco, Cal.—Meets 2d and 4th Wednesdays at Foresters' Hall, 20 Eddy st.; Pres., J. J. Cameron, 283 Clementinast; R. S., A. A. Whithfield, 632 Natoma st.; F. S., R. P. Gale, 1210 Broadway st.

No. 7, Springfield, Mass.—Meets every Wednesday at room 14, Barnes Bldg.; Pres., G. T. McGilvray, 30 Besse Pl.; R. S., T. J. Lynch, Chicopee Falls, Mass.; F. S., M. Farrell, 59 Broad st.

No. 8, Toledo, O.—Meets every Monday at Friendship Hall; Pres., C. W. Schausen, 1846 Ontario st.; R. S., W. H. Kessler, 701 South st.; F. S., F. M. Gensbechler, 713 Colburn st.

No. 10, Indianapolis, Ind.—Meets every Monday at Mozart Hall, 39 S. Del. st.; Pres., John Berry, care hdqrs. Fire Dept.; R. S., Geo. R. Beecher, 813 N. Senate av.; F. S., Lee E. Jones, 1110 W. Washington st.

No. 12, Greater New York—Pres., W. W. Vaughan, 9 Nassau st., Brooklyn; R. S., Chas. L. Rogers, 134½ Kosciusko st., Brooklyn; F. S., F. G. Orrt, 334 First st., Brooklyn.

No. 17, Detroit, Mich.—Meets every Tuesday night at No. 9 Cadillac sq.; Pres., R. Scanlan, 90 Porter st.; R. S., G. Brown, 50 Cluster av.; F. S. T., Forbes, 1104 13th st.

No. 18, Kansas City, Mo.—Meets every Friday night, Labor hdqrs., 1117 Walnut st.; Pres., H. 935 Oswald st.; K. C., Kan.; R. S., F. J. Schadel, 612 Wall st., K. C., Mo.; F. S., C. C. Drollenger, 613 Delaware st., K. C., Mo.

No. 19, Atchison, Kan.—Pres., F. J. Roth, 906 N. Tenth st.; R. S., H. G. Wickersham; F. S., R. E. Easton, 600 Conil st.

No. 22, Omaha, Neb.—Meets every Wednesday at Labor Temple, 17th & Douglas sts.; Pres., W. P. Leedom, 2020 Grange st.; R. S., H. G. Kriep, Klondyke Hotel; F. S., M. J. Curran, 617 S. 16th st.

No. 23, St. Paul, Minn.—Pres., J. H. Roadhouse, 150 Sherburne av.; R. S., W. B. Tubbesing, 497 Martin st.; F. S., A. H. Garrett, 201 S. 6th st.

No. 24, Minneapolis, Minn.—Pres., O. R. Shortall; R. S., W. J. Herwood, 16 E. 26th st.; F. S., P. H. C. Wood, 2731 Tremont av. S.

No. 25, Louisville, Ky.—Pres., John Sales; R. S., McGonigale Miller, care Union Hall, 516 5th st.

No. 26, Washington, D. C.—Meets every Saturday at 628 Louisiana av.; Pres., John Hoffecker, 1007 N. Carolina av. S. E.; R. S., J. C. O'Connell, 930 E. st., N. W.; F. S., G. A. Malone, 48 J. st., N. W.

No. 27, Baltimore, Md.—Meets every Monday at Hall cor. Fayette and Park avs.; Pres., W. W. Welsh, 1420 Aisquith st.; R. S., Wm. R. Kelly, 405 E. Lanvale st.; F. S., F. H. Russell, 1408 Aisquith st.

No. 30, Cincinnati, O.—Meets 1st and 3d Mondays at 130 E. Court st.; Pres., Wm. Williams, 26 Mitchell av., Mt. Auburn City; R. S., Wm. Price, 1046 Celestial st., Mt. Auburn City; F. S., Geo. R. Hildebrand, S. E. cor. 4th & Broadway, Mt. Auburn City.

No. 31, Anaconda, Mont.—Pres., Thos. Dwyer, care Elect. Light Co.; R. S., J. F. Keed; F. S., Chas. McDonald, Carroll, Mont.

No. 32, Lima, O.—Pres., O. G. Snyder, 812 High st.; R. S., W. Holmes; F. S., Wm. R. Kraus, 213 E. Wayne st.

No. 35, Boston, Mass.—Meets every Wednesday at 49 Bennett st.; Pres., T. R. Melville, 21 Moulton st., Charlestown, Mass.; R. S., J. B. Jeffers, 27 McLean st.; F. S., W. C. Woodward, 10 Church st.

No. 36, Sacramento, Cal.—Meets 1st and 3d Tuesdays at Foresters' Hall; Pres., Chas. M. Durkee, 624 G st.; R. S., William F. Morley, 529½ K st.; F. S., F. O. Hutton, 1617 M. st.

No. 37, Hartford, Conn.—Meets every Wednesday at 603 Main st.; Pres., W. H. Crawley, 23 Spring st.; R. S., M. P. Sullivan, 22 Village st.; F. S., J. J. Tracy, 58 Temple st.

No. 38, Cleveland, O.—Meets every Wednesday night at 356 Ontario st.; Pres., Geo. H. Gleason, 110 Maple st.; R. S., R. M. Ross, 59 Colgate st.; F. S., A. Herron, 4 Wallace st.

No. 40, St. Joseph, Mo.—Meets every Thursday night at Brokaw Hall, 8th and Locust sts.; Pres., Frank P. St. Clair, R. Y. Co.; R. S., Wm. T. Dorsel, R. Y. Co.; F. S., J. C. Schneider, City Elec. St. Co.

No. 41, Buffalo, N. Y.—Meets every Wednesday at Council Hall; Pres., Jas. A. Burgess, 664 Main st.; R. S., Geo. W. Bass, 169 Vermont st.; F. S., H. M. Scott, 363 N. Morgan st.

No. 42, Utica, N. Y.—Pres., W. T. Carter, 68 Neilson st.; R. S., G. O. Carter, 26 Elm st.; F. S., F. Daaher, 210 Blaudina st.

No. 43, Syracuse, N. Y.—Meets 1st and 3d Tuesdays at McCarthy's Hall, Market st., opp. City Hall; Pres., A. Donovan, 310 Niagara st.; R. S., F. N. Stiles, 734 E. R. R. S.; F. S., Wm. H. Gough, 108 Hawthorne st.

No. 44, Rochester, N. Y.—Meets 2d and 4th Wednesdays at Odd Fellows' Hall, State st.; Pres., J. P. Wolff, 9 Cedar st.; R. S., A. L. Deniston, 14 Baldwin st.; F. S., Fred Martin, 50 Champlain st.

No. 45, Buffalo, N. Y.—Meets 1st and 3d Saturdays at Council Hall; Pres., F. Devlin, 711 Virginia st.; R. S., J. Dingbaum; F. S., M. E. Stable, 46 Kail st.

No. 46, Lowell, Mass.—Meets every Thursday at 202 Merrimack st., 3d floor, room 5; Pres., Herbert L. Whitney, 6 Puffer av.; R. S., Jas. Barrett, 17 First st.; F. S., H. F. Harding, 38 E. Pine st.

No. 47, Worcester, Mass.—Meets every Wednesday evening at 306 Main st.; Pres., S. A. Stout, 130 Austin st.; R. S., V. V. Reed, 61 Myrtle st.; F. S., Chas. C. Cogliu, 115 West st.

No. 48, Decatur, Ill.—Meets at Cigarmakers' Hall, E. Main st.; Pres., J. B. Mulenix, 611 Spring st.; F. S., F. E. Aldrich, 115 Wood st.

No. 49, Chicago, Ill.—Meets every Second and Fourth Tuesday at Juugs Hall, 16 E. Randolph st.; Pres., F. J. Strubie, 40 W. Division st.; R. S., Walter J. Dempsey, 153 Throop st.; F. S., Chas. Fowler, 219 W. Congress st.

No. 52, Newark, N. J.—Pres., J. H. Thomas, 346 W. 59th st., N. Y. City; R. S., W. S. Harrington, 24 Willow st., Bloomfield N. J.; F. S., Ed. Blakelock, 7 Linden st., Newark, N. J.

No. 53, Harrisburg, Pa.—Pres., C. A. Swager, 115½ Market st.; R. S., Jas. E. Emlinger, 25 N. 15th st.; F. S., C. A. Andeson, 46 Sunnitt st.

No. 55, Des Moines, Ia.—Meets every Thursday night at Trades Assembly Hall; Pres., J. Fitzgerald, 1924 Siner st.; R. S., C. C. Ford, 715 Scott st.; F. S., M. O. Tracey, 212 Raceon st.

No. 56, Erie, Pa.—Meets 1st and 3d Wednesdays; Pres., P. Jacobs, 161 East 7th st.; R. S., L. E. Carson, 303 French st.; F. S., J. F. St. Clair, 708 French st.

No. 57, Salt Lake City, Utah—Pres., J. R. Blair, 258 S. 2nd East st.; R. S., J. Hodgson, Utah Power House; F. S., A. W. Scott, Valley House.

No. 60, San Antonio, Tex.—Meets 1st and 3d Saturdays at 8 p. m., in Painters' Hall, 131 Soldad st.; Pres., Martin Wright, 114 Romana st.; R. S., A. C. Larum, 116 Nebraska st.; F. S., Chas. E. McNamee, 819 Av. D.

No. 61, Los Angeles, Cal.—Pres., P. Buchanan, 357 N. Main st.; R. S., W. A. Woodward, Box 84 Station B; F. S., S. L. Brose, 441 Colton st.

No. 62, Troy, N. Y.—F. S., M. J. Keyes, No. 3 Short 7th st.

No. 63, Warren, Pa.—Meets 1st and 3d Wednesdays at D. O. H. Hall, cor. 2d and Liberty sts.; Pres., F. W. Lesser, Liberty st.; R. S., R. V. Eden, Revere House; F. S., N. H. Spencer, Rogers Blk.

No. 65, Butte, Mont.—Meets 2d and 4th Wednesdays in Good Templars' Hall; Pres., Jas. Davidson, 119 Owsley Blk.; R. S., W. C. Medhurst, P. O. Box 846; F. S., E. M. DeMers, P. O. Box 846.

No. 66, Houston, Tex.—Meets 1st and 3d Mondays, Pres., Geo. O. Wood, 1203 Capital av.; R. S., W. P. Johnson, Telephone Office; F. S., W. P. Caywood, 1413 Franklin av.

No. 67, Quincy, Ill.—Meets 2d and 4th Wednesdays at Trades Assembly Hall, S. 8th st.; Pres., J. H. Nessler, 525 Maiden Lane st.; J. M. Redmond, 825 Jersey st.; F. S., C. H. McNamee, 511 S. 7th st.

No. 68, Denver, Col.—Meets Monday nights at 1731 Aphro. st., Club Bldg.; Pres., Fred Fleeger, 1931 Peppin av.; R. S., F. Warner, 1110 Sararam st.; F. S., C. W. Armstrong; 634 30th av.

No. 69, Dallas, Tex.—Meets every Tuesday evening at Labor Hall; Pres., P. F. Barnes, 147 Akard st.; R. S., C. E. Boston, 438 Main st.; F. S., C. F. Wheeler, 438 Main st.

No. 70, Springfield, Ill.—Meets 1st and 3d Thursdays, Carpenters' Hall, S. 4th st.; Pres., Fred Miller, Staley Hotel; R. S., Chas. Danilson, 1118 E. Jackson st.; F. S., S. Phillips, 842 N. 3d st.

No. 71, Galveston, Tex.—Meets 2d and 4th Thursdays, Cooks and Waiters' Hall, 23d st., between Market and Mechanic; Pres., J. H. Payne, 1528 22d st.; R. S., D. L. Gobie, 3320 R. ½ st.; F. S., D. K. Garrett, 1204 39th st.

No. 72, Waco, Tex.—Meets 2d and 4th Wednesdays at Labor Hall; Pres., J. E. Caple, 1018 N. 7th st.; R. S., W. D. Harold, 1801 Herring av.; F. S., Joseph Hodges, 728 S. 6th st.

No. 73, Spokane, Wash.—Meets 1st and 3d Wednesdays in J. C. of P. Hall, 316 Riverside av.; Pres., Eli Heusley, 213 Riverside av.; R. S., L. Van Ingen, 919 Ash st.; F. S., D. Lorimer, 320 Fifth av.

No. 74, Winona, Minn.—Pres., H. B. Klein, 510 Olmstead st.; R. S., Dan Bahmer, 161 Harvest st.; F. S., Joseph Trautner, 620 E. 3rd st.

No. 75, Grand Rapids, Mich.—Meets 1st and 3d Sundays; Pres., Jos. Newman, 16 Kennedy st.; R. S., C. M. Bum, 195 Sheldon st.; F. S., C. E. Post, 132 Winter st.

No. 76, Tacoma, Wash.—Pres., Wm. Kane, 1136 D st.; R. S., W. J. Love, 113 10th st.; F. S., Jas. Murray, 1113 D st.

No. 77, Seattle, Wash.—Pres., J. J. Maitland, 231 Poulton av.; R. S., S. Curkeek; F. S., J. J. Jenkins, 1319 14th av.

No. 78, Chicago, Ill.—Pres., W. J. McCormick, City Electric Light Station, Sedgwick & Chicago ave.; F. S., George H. Falls, 351 W. Adams st.; R. S., W. T. Tonner, 1479 Ohio st.



SAMPLES WANTED.

Lima, O., Feb. 26, 1899.

J. L. Squerguhin, Sec'y.,

Pumpville, Kan.

Dear Sir: In your advertisement I notice you want capital, and lots of it (so does everybody) for your new process to keep things green around the frozen latitude. Well, if you can let me in on the ground floor and send a sample of the air to show the people here I feel assured you will soon have all you want, as some of the folks in this part of the country have saved up a snug sum of money the past year. I know one man who has \$16.00, and would be willing to invest it, as he is all wrapped up in Nick'o. So are all other practical men around here who have been trying to set stock in his company to send power to Paris and other places, but no one is able to get a sample lot. He seems to be stingy with everything but talk, and we have come to the conclusion that he is like all big men, he wants it all for himself. Now you, being in close touch with him, could touch him, no I don't mean that; I mean could induce him to send one of his wireless telegraphy balloons, or, if he has not got one in stock, send the falls up here as samples, I have no doubt he can get money enough to start him up, so people can see that he really means some of the things he says to the papers, and to people that believe all they hear. Now, it seems to me that you have not considered all the money making points of the H. A. C. Co., limited. Since we have got Cuba, Porto Rico, the Philippines and some more places we do not need very much. Would it not be a good plan to work the hot and cold air business at the same time, both summer and winter, and, at the same time, you might induce Nick'o (being so close to him) to use his ingenious machine for working death-dealing boats and machines to fight our battles in the Philippines and let Dewey come home, as some people (you know some folks do not appreciate things of this kind) would rather see Dewey than invest money in new inventions, and if Nick'o could only fight for us with his long distance electrical machine, which I understand can be controlled by the human will, perhaps the people would be glad to hear from him, and maybe (who can tell) believe he can do something besides talk and make assertions that no one can believe. Now, I think the enclosed suggestions should be worth quite a bit to your company, and you can send me a \$100,000 block of stock for pay, and perhaps I will club in with some other capitalists and take some more, but whatever you do in the matter do not forget to send me samples.

Yours very truly,

FRACTICAL.

HUBBARD'S PRACTICAL REFERENCE BOOK,

CONTAINING
Sectional Illustrations with Full Descriptions
—FOR—
Stationary, Marine and Locomotive Engineers, Firemen,
Electricians, Motormen, Ice Machine Men
and General Mechanics
To Prepare for Civil Service or License Examinations.

1898.

THIS work is a book of practical information for mechanics generally. It is one of the most complete combinations ever published. The numerous sectional illustrations were made especially to clearly explain the subjects under consideration, showing many new appliances and devices not shown in any other work. The index is alphabetically arranged so that any part of a subject can be easily found without reading over a whole chapter. Everything is explained in the most simple language, so there can be no misunderstanding on any subject.

Sent postpaid on receipt of Price, \$1.00.

Address Electric Worker, 731 Powers Building,
ROCHESTER, N. Y.

The Motor Engineer's & Electrical Worker's Hand-Book

CONTENTS.

I—Elementary Principles: Units, Ohm's Law, Watt, Kilowatt, Ampere, Turn, Hour, etc.; Potential, E. M. F., Voltage, Drop of Potential, Resistance (Ohmic), Conductivity. II—Magnetism and Electro-Magnetic Induction. III—Circuits: Varieties of Circuits, Series, Shunt, Parallel or Multiple Arc, Joint Resistances of Parallel Circuits, Multiple Series, Series Multiple. IV—Dynamo Electric Machine; General Principles, Field Windings (Varieties) Series, Shunt, Compound, etc.; Short Shunt, Long Shunt. V—Instructions for Operating Generators; Running a Single Generator, To Shut Down a Machine not running in Multiple, Sparking, Polarity, Excitation, Grounds, Generators in Multiple, Connections, Running Generators in Multiple, To Shut Down a Machine running in Multiple. VI—The Electric Motor: General Principles, Counter Electro-Motive Force, and Mechanical Power, Efficiency. VII—Measurements and Tests of Street Railway Motors; Faults, Measurement by Drop of Potential Method (examples); Insulation Tests, Volt-Meter, Method, Description of Volt Meter and Ammeter; Wheatstone Bridge, Instructions for Operating Drop of Potential in Motor Circuits. VIII—Instructions for Operating Car Apparatus: Brushes, Sparking at Brushes, Bearings, Bucking, Fuse Block, Operating Car, Trolley, etc. IX—The Electric Motor Car in Detail: Series, Parallel, Controller, Reverse Switch, Rheostat, Fuse Box, Lighting Arrestor, Heaters. X—Definitions of Terms. XI—Diagrams of Car Wiring and Controllers: With Written Descriptions and Diagrams of Combinations—Westinghouse System (G, No. 14, No. 28 and 28 A); General Electric (K with W. P. Machines K2); General Electric Series Parallel Controller with Magnetic Brake; Walker System (B2, E), Steel Motor Company System. XII—General Electrical and Mechanical Information: Belting, Shafting, Pulleys and Gears, Melting Point, Specific Gravity and Relative Conductivity, Table Comparing Wire Gauges, Number, Dimensions, Height, Length and Resistance of Pure Copper Wire, Electrical Units and Formulas, Equivalent Carrying Capacity, Fractions of an inch reduced to Mils or Thousandths, Proportions of Gear Teeth, Notes, Bill of Material for Span Wire Construction (Single Track, Double Track), Bracket Construction (Single Track, Center Pole, Double Track).

Bound in Red Leather, Pocket-book form, with Sixteen Blank Pages for Notes, etc.
Sent postpaid on receipt of price—\$1.00.

Address: ELECTRICAL WORKER,

731 Powers Block,

Rochester, N. Y.